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- Policy, legislation, and regulatory control
- Availability and supply
- Administration and dosage
- Choice of therapy, indication, contraindications
- Drug interaction
- Pharmacovigilance, Adverse drug reactions
- Essential drugs

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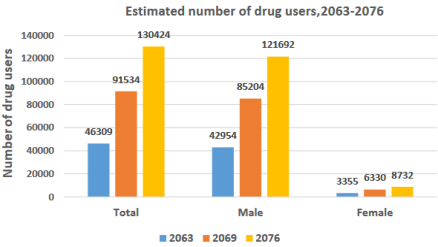
EDITORIAL

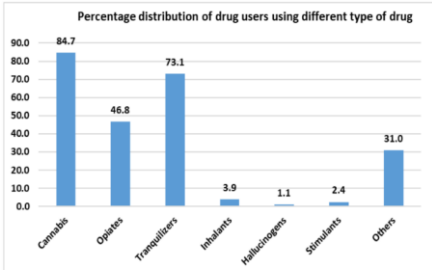
Drug misuse and abuse: Role to DDA to prevent drug misuse, abuse and illicit trafficking

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Drug abuse is a global problem affecting millions of people. As per the World Drug Report 2019, 35 million people worldwide suffer from drug use. One of the key impacts of illicit drug use on society is the negative health consequences experienced by its members. Drug use also puts a heavy financial burden on individuals, families and society.

Substance use is a common public health problem among adolescents in low and middle-income countries. Drugs such as cannabis and alcohol have traditionally been used in Nepal for centuries as a part of cultural norms which did not create major social problems during those periods. However, the types of drugs being used have been shifted from cannabis to synthetic opiates and chemical substances in the last few decades. Also, the mode of drug usage has been changed from smoking/ingesting to injecting and that has become one of the major causes of HIV infection. Drug abuse has become multi-dimensional problem in Nepal and, as a result, drug control has become a challenge for the government.

Nepal Drug Users Survey (NDUS) conducted by Ministry of Home Affairs with technical support from Central Bureau of Statistics (CBS) in 2076 showed an average annual growth rate of drug users in the country from 2069 to 2076 BS with majority of them being male drug users (93.3 %) and the most common drug use being cannabis.





Nepal has promulgated the Drug Act 1978, to prohibit the misuse or abuse of medicines and allied pharmaceutical products as well as false or misleading information relating to efficacy and use of drugs and to regulate and control the production, marketing, distribution, export, import, storage and utilization of those drugs which are not safe for the public use, efficacious and of standard quality. To implement & fulfill the aim and objectives of Drug Act 1978 and various regulations are made under it. Also, Narcotic Drugs control act, 1976 is in place to regulate the Narcotic and Psychotropic substances.

Nepal became a member of International Narcotic control Board on 29th June, 1987. The ministry of home affairs serves as the Focal Point for Narcotic and Psychotropic substances regulation and the department works with Home Affairs in recommending the Domestic Manufacturers and Importers for importing Narcotic and Psychotropic drugs for medicinal and scientific purpose.

The department carries out its regulation inspection of the Pharmacies to ensure that good practice is in place and has been taking actions where action contrary to good practice are encountered. Abuse of pharmaceutical drugs such as Tramadol (Opidol) tablets/capsules, Nitrazepam (Nitrosun) tablets, Inj. Pheniramine maleate (Avil), Inj. Promethazine (Phenargan) is in increasing trend. Also, Less number of qualified manpower in pharmacy, Low monitoring and control in medicine sale and distribution and Lack of common understanding of narcotics and psychotropic between different stakeholders has

somewhat contributed to increased misuse/abuse of drugs.

Similarly, controlled drugs like tramadol, tapentadol, pregabalin, dicyclomine has also been on the use due to their relatively lower cost and longer duration of action. The department issued a notice on 2075/04/25 to concerned stakeholders regarding the sales and distribution of Tramadol from Hospital Pharmacy Outlets only to prevent the misuse/abuse of Tramadol as per the recommendation of Drug Advisory committee's 49th meeting dated 2075/03/29.

To prevent the misuse and abuse of controlled drugs, the department has started the practice of allocating yearly quotas for manufacturers and importers on the basis of their previous import data and consumption details of these substances. Also, it has been working closely with law enforcement agencies in conducting joint inspection to find out the whereabouts of the illicit drug trafficking.

The department faces many challenges ahead regarding the prevention of misuse/abuse of drugs and illicit trafficking trade of drugs. The open borders and lack of sufficient monitoring on the border areas has led to the entry of substandard/falsified medicines and its prevalence on the country. Thus a need for a multi-sectorial approach is the most. The custom must further work to examine the documents relating to import / export / transit of consignment of narcotic and psychotropic substances and physically examine or test checking the chemicals that are proposed to be imported or exported. Even if chemicals are diverted by-passing the normal procedures of import / export, i.e. attempted to be smuggled, customs still have an important role to play. Nepal Police have a much greater presence than any other agency in the country. Road checks of police may help in checking suspicious movements of narcotic and psychotropic drugs. The Narcotic Bureau also Play an very important role. They can work on Issuance of No Objection Certificate after making necessary enquiry or verification about the genuineness of the proposed transaction and checking of pre-export notification (PEN) issued by the competent authority of the

exporting country.

Similarly, Coordination with International Narcotic Control Board (INCB) and with Competent Authorities of other countries, educating the Trade and Industry for their obligations, Urging management / staff of the Trade and Industry to identify suspicious transactions and appropriately notify the enforcement agencies, Conducting training for enhancing the effectiveness of control of narcotics and psychotropic drugs and Maintaining the national database are other steps needed to be taken in the fight against illicit trafficking of drugs.

The department must also work in Coordination with other law enforcement agencies within the country when it comes to Inspecting or auditing a manufacturing unit, assessing their production and examining the records of production of pharmaceutical products using narcotic and psychotropic substances.

Narayan Prasad Dhakal
(Director General)
Chief Editor

1. आ.व. २०७९/८० दोश्रो त्रैमासिक को प्रगति विवरण

अनुगमन, मुल्यांकन तथा कानुन कार्यान्वयन महाशाखा अन्तर्गत मुख्य कार्यहरु:

औषधि पसल/फार्मेसी निरीक्षण :

विवरण	काठमाडौं	विराटनगर	वीरगंज	नेपालगंज	जम्मा
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औषधि मुल्यांकन तथा दर्ता महाशाखा अन्तर्गत मुख्य कार्यहरुः

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2. REGULATORY NEWS

Amoxicillin

1. **Risk of drug-induced enterocolitis syndrome (DIES)**

Ireland. The Health Products Regulatory Authority (HPRA) has announced that the product information for amoxicillin will be updated to include the risk of drug-induced enterocolitis syndrome (DIES).

Amoxicillin (as a single substance or in combination with other antimicrobials) is a semi-synthetic broad spectrum penicillin antibiotic, and is indicated for the treatment of bacterial infections caused by amoxicillin-sensitive gam positive and gram-negative pathogens.

Following a recent review of the available safety data by the EMA PRAC, a causal relationship between amoxicillin and DIES is considered to be reasonable possibility.
DIES is an allergic reaction with the leading symptom of protracted vomiting (1-4 hours after drug administration) in the absence of allergic, skin or respiratory symptoms. Further symptoms could comprise of abdominal pain, diarrhea, hypotension or leukocytosis with neutrophilia. There have been severe cases of DIES which have progressed to shock. DIES has been reported mainly in children receiving amoxicillin.

2. **Risk of acute coronary syndrome accompanying allergic reaction**

Japan. The MHLW and PMDA have announced that the product information for amoxicillin should be revised to include the risk of acute coronary syndrome accompanying allergic reaction.

The MHLW and PMDA reviewed cases of acute coronary syndrome accompanying allergic reaction reported domestically and internationally. In internationally reported cases, a causal relationship between the drug and event was reasonably possible.

The MHLW and PMDA concluded that acute coronary syndrome accompanying allergic reaction should be added as a clinically significant adverse reaction.

Health-care professionals are advised to interview patients on their medical

history of allergic reactions to antimicrobials before treatment with amoxicillin.

Source: WHO Pharmaceuticals Newsletter No.1, 2023

Glucagon-like peptide-1 (GLP-1) receptor agonists
Risk of cholecystitis, cholangitis and cholestatic jaundice

Japan. The MHLW and PMDA have announced that the product information for Glucagon-like peptide-1 (GLP 1) receptor agonists should be revised to add the risk of cholecystitis, cholangitis and cholestatic jaundice (acute gallbladder diseases).

GLP-1 receptor agonists include the following medicines: exenatide (Byetta®, Bydureon®), semaglutide (Ozempic®, Rybelsus®), dulaglutide (Trulicity®), lixisenatide (Lyxumia®), insulin glargine/lixisenatide (Soliqua®), liraglutide (Victoza®), insulin degludec/liraglutide (Xultophy®) and tirzepatide (Mounjaro®), all in the form of subcutaneous injection except semaglutide (Rybelsus®) as tablet. Cholelithiasis is a known adverse reaction to these medicines that are indicated for the treatment of type 2 diabetes mellitus.

The MHLW and PMDA assessed 48 domestic cases of adverse event reports involving GLP-1 receptor agonists and the events. In 17 cases, a causal relationship between the medicine and event was reasonably possible. Although the event reporting and causal possibility were not made for all GLP-1 receptor agonists, the pharmacological mechanism, such as inhibition of gallbladder contraction, was considered to promote gallstone formation and cause acute gallbladder disease as a class-effect.

Health-care professionals should consider close investigation of the cause, including imaging tests, if abdominal symptoms such as abdominal pain are observed in patients. The MHLW and PMDA concluded that cholecystitis, cholangitis and cholestatic jaundice should be added as clinically significant adverse reactions, in addition to cholelithiasis.

Source: WHO Pharmaceuticals Newsletter No.2, 2023

Imatinib
Risk of thrombotic microangiopathy

Japan. The MHLW and PMDA have announced that the product information for imatinib should be revised to include the risk of thrombotic microangiopathy.

Imatinib is indicated for the treatment of chronic myeloid leukemia and other cancers.

The MHLW and PMDA reviewed international and national reports of thrombotic microangiopathy, and a causal relationship between the drug and event was reasonably possible. The MHLW and PMDA concluded that thrombotic microangiopathy should be added as a clinically significant adverse reaction.

Health-care professionals are advised to suspend treatment with imatinib when anemia with fragmented red blood cells, thrombocytopenia, or renal dysfunction are observed.
Source: WHO Pharmaceuticals Newsletter No.1, 2023

Finasteride
Risk of suicidal ideation and self-injury

Canada. Health Canada has announced that the product safety information for finasteride will be updated to strengthen warnings on the risks of suicidal ideation and self-injury.

Finasteride is indicated for the treatment and control of prostate enlargement and for the treatment of male pattern hair loss (androgenetic alopecia)

Triggered by the publication of a media article that discussed the potential risk of suicide in patients using finasteride for male pattern hair loss, Health Canada reviewed the available information.

• Data from the Canada Vigilance database indicated 401 cases (29 domestic and 372 international) of suicide, suicidal ideation and/or self-

injury in patients using finasteride were found. Of the 401 cases, 25 cases (10 domestic) met the criteria for further assessment, and 23 cases (9 domestic) were found to be possibly linked to the use of finasteride.
• In the scientific literature, there was a growing body of scientific evidence showing the association between the use of finasteride and the risks of suicide, suicidal ideation and self-injury
The review found a possible link between the use of finasteride and the risks of suicidal ideation and self-injury. Currently, there is not enough information to establish a link between the use of finasteride and the risk of suicide.

Health-care professionals are advised to screen patients for psychiatric risk factors prior to starting treatment, as well as continuous patient monitoring during and after stopping treatment.
Source: WHO Pharmaceuticals Newsletter No.2, 2023

Hydrochlorothiazide
Risk of acute respiratory distress syndrome (ARDS)

Japan. The MHLW and PMDA have announced that the product information for hydrochlorothiazide should be revised to include the risk of acute respiratory distress syndrome (ARDS).

Hydrochlorothiazide is indicated for the treatment of hypertension and edema.

The MHLW and PMDA reviewed cases of ARDS reported domestically and internationally. In internationally reported cases, a causal relationship between the drug and ARDS was reasonably possible.

Considering the severity of ARDS and following the product information revision in the EU, the MHLW and PMDA concluded that ARDS should be added as a clinically significant adverse reaction.
Source: WHO Pharmaceuticals Newsletter No.1, 2023

Itraconazole
Risk of hypokalemia
Japan. The MHLW and PMDA have announced that the product

information for itraconazole (oral dosage form and injections) should be revised to include the risk of hypokalemia.

Itraconazole is indicated for the treatment of fungal infection.

The MHLW and PMDA reviewed three cases of hypokalemia reported domestically, in which a causal relationship between the drug and event was reasonably possible.
The MHLW and PMDA concluded that hypokalemia should be added as a clinically significant adverse reaction.
Health-care professionals are advised to perform blood electrolyte tests periodically irrespective of particular conditions for use (e.g., dosage and period of administration).
Source: WHO Pharmaceuticals Newsletter No.1, 2023

3.SAFETY OF MEDICINES

Ceftriaxone and cefotaxime
Risk of severe hypersensitivity reaction

Egypt. The EPVC, EDA has issued DHPC to remind health care professionals of safety measures to minimize the risk of severe hypersensitivity reaction, anaphylaxis and other life-threatening adverse events**.**

Ceftriaxone and cefotaxime are antibiotics indicated for the treatment of various infections, and are strictly contraindicated in patients with history of immediate type hypersensitivity to cephalosporins.
The EPVC received reports of hypersensitivity, anaphylaxis and other life-threatening adverse events which could be linked to these medicines administered improperly or without sensitivity testing.

Prior to administration, Health care professionals should verify if the patient has had previous hypersensitivity reactions to cefotaxime sodium, ceftriaxone, cephalosporins, penicillin, or other medicine. A sensitivity test should be performed before each dose. It is recommended to administer these medicines in hospital settings with preparations for emergency

measures.
Source: WHO Pharmaceuticals Newsletter No.2, 2023

Minoxidil
Risk of folliculitis

India. The NCC-PvPI, IPC has recommended the CDSCO to revise the prescribing information leaflet (PIL) for minoxidil to include folliculitis as an adverse drug reaction. The recommendation is under consideration of the CDSCO.

Minoxidil is indicated for the treatment of alopecia (male pattern baldness) in men.

The NCC-PvPI, IPC reviewed 17 ICSRs of minoxidil associated folliculitis and a causal relationship between them was found.
Source: WHO Pharmaceuticals Newsletter No.1, 2023

Isotretinoin
Potential risk of blood growth hormone decreased (BGHD)

Saudi Arabia. The SFDA has released a safety signal concerning isotretinoin (oral dosage form, Roaccutane®) and the potential risk of blood growth hormone decreased (BGHD).

Isotretinoin is a retinoid and derivative of vitamin A and its oral dosage form is indicated for the systemic treatment of acne.
The SFDA reviewed five ICSRs involving isotretinoin (oral dosage form) and BGHD that were reported in VigiBase. The WHO-UMC causality assessment criteria were applied, and there was one possible case (the other four cases were not assessable). Datamining indicated positive association (IC= 2.7) in VigiBase. Additionally, evidence from a multi-center study in the literature was supportive for this signal.

The SFDA's review concluded that the current available evidence might support a relationship between isotretinoin and BGHD.
Health-care professionals should be aware of this potential risk and are advised to monitor any signs or symptoms in treated patients.

Source: WHO Pharmaceuticals Newsletter No.2, 2023

Newer antidiabetic medicines used with insulin and/or sulfonylureas Risk of hypoglycemia

New Zealand. The Medsafe has alerted health-care professionals on the risk of hypoglycemia associated with newer antidiabetic medicines (glucagon-like peptide 1 (GLP 1) receptor agonists, sodium glucose co-transporter 2 (SGLT-2) inhibitors or dipeptidyl peptidase-4 (DPP-4) inhibitors) used concomitantly with insulin and/or sulfonylureas.

Newer antidiabetic medicines are not typically associated with hypoglycemia when used as monotherapy, although two cases have been reported domestically.

Health-care professionals should monitor for and discuss the risks of hypoglycemia when prescribing medicines to treat type 2 diabetes mellitus. Patients on concomitant therapy may require a lower dose of insulin or the sulfonylurea to prevent episodes of hypoglycemia.

Source: WHO Pharmaceuticals Newsletter No.1, 2023

Valproate
Risks in pregnancy and potential risks in male patients

United Kingdom. The MHRA has reminded health-care professionals of the risks in pregnancy and the current Pregnancy Prevention Programme (PPP) requirements and provided information about the potential risks of valproate in other patients including male patients. New safety measures for valproate-containing medicines are to be put in place in the coming months.

Valproate is indicated for the treatment of epilepsy and bipolar disorder. As valproate has a high teratogenic potential, it is contraindicated in female children and women of childbearing potential unless other treatments are ineffective or not tolerated and other conditions of PPP are met. PPP was introduced in 2018 to ensure all women and girls are fully informed of the risks and the need to avoid exposure to valproate medicines in pregnancy through annual review and signing a risk acknowledgement form.

In 2022, the Commission on Human Medicines (CHM) considered a review of safety data relating to valproate. This review included prescribing data showing continued use of valproate in female patients and also some use during pregnancy, as well as evolving information about potential risks in male patients. The CHM has recommended a number of regulatory actions to further strengthen safety measures for valproate, which will be introduced over the coming months and include:

• No patients (male or female) under the age of 55 years should be initiated on valproate unless two specialists independently consider and document that there is no other effective or tolerated treatment.
• For patients under 55 years currently receiving valproate, two specialists should independently consider and document that there is no other effective or tolerated treatment or the risks do not apply.
• Further warnings in the product information, improved educational materials, and better monitoring of health-care professionals' compliance with the new measures.

Source: WHO Pharmaceuticals Newsletter No.1, 2023

4. SIGNAL

A signal is defined by WHO as reported information on a possible causal relationship between an adverse event and a drug, the relationship being unknown or incompletely documented previously.

Myocarditis and the COVID-19 vaccines

Joseph Mitchell, MBBS; Qun-Ying Yue, MD

Summary

The vaccines being used against the SARS-CoV-2 virus include the first mRNA-based vaccines approved for use in humans (Pfizer-BioNTech and Moderna) and continuous evaluation of their safety is critical. An assessment of the reports in VigiBase, the WHO global database of individual case safety reports, regarding myocarditis following

administration of one of the COVID-19 vaccines was performed. As of 5 May 2021, there were 214 cases reporting the preferred term “Myocarditis” for all COVID-19 vaccines. There was no statistically significant disproportionate reporting across all COVID-19 vaccines, but when stratified by vaccine manufacturer there was a statistically significant increase in observed reports compared to a calculated expected number of reports for the Moderna and Pfizer-BioNTech vaccines. The 214 cases went through manual clinical evaluation and 141 were included in the final analysis. The cases were generally serious (n=132, 94%) and, in keeping with disease epidemiology, more common in males (n=87, 62%) and in younger adults, with 95 (67%) reports for those between 18 and 44 years old. The median time-to-onset (TTO) was three days (range 0 to 34 days). There were more cases after the second dose, a finding driven completely by the mRNA vaccines, and there seemed to be a more rapid onset of symptoms after the second dose. A relationship has been proposed for COVID-19 disease and myocarditis as well as myocarditis following smallpox vaccination. The mechanism of any association is unclear, but they could include the interaction of the spike protein used in the vaccine with myocardial cells, and an inflammatory response to the vaccine. It is not possible to estimate the incidence of myocarditis from this case series and there are other factors such as geographic distribution of use of each vaccine that will affect the results. However, from the available evidence there does appear to be a possible association with the mRNA vaccines and myocarditis that requires further investigation.

Introduction

A global vaccination campaign is currently in progress, protecting against infection with the virus SARS-CoV-2. These vaccines include the first mRNA-based vaccines approved for use in humans. Myocarditis, an inflammation of the myocardium can be caused by many agents, but most commonly by viral infections, including coronaviruses1,2 . However, it is associated with several causes, such as the smallpox vaccine2,3. Myocarditis can range from asymptomatic to a life-threatening disease and often presents with chest pain, arrhythmia, or heart failure4,5. The gold-standard for diagnosis is biopsy, but this is rarely performed. Cardiac MRI has recently become a preferred diagnostic tool, as it is more specific than other investigations such as ECG or echocardiography5 .

Reports in VigiBase

VigiBase, the WHO global database of individual case safety reports (ICSRs), was used to explore the combination of COVID-19 vaccines and myocarditis. As of 5 May 2021, there were 678,607 ICSRs related to the COVID-19 vaccines, 214 of which with the preferred term "Myocarditis". Disproportionality calculations were non-significant (observed 214 versus expected 222). However, when stratified by vaccine manufacturer, the disproportionality calculations of Pfizer-BioNTech and Moderna were found to be statistically significant (see Table 1). The Pfizer-BioNTech and Moderna vaccines also represented the vaccines with the most recorded cases, 105 and 51 respectively.

Upon manual clinical review of the ICSRs, four were duplicates; a further 69 were excluded based on pre-determined exclusion criteria, which were:
• that the case did not meet any of the diagnostic criteria for possible, probable or confirmed myocarditis

, • there were other possible diagnoses, or

• the onset of symptoms occurred prior to the first vaccination dose.

All included ICSRs (n=141) were adjudged to be a possible, probable or confirmed myocarditis case, with adjusted diagnostic certainty criteria, based on previous study protocols (see Table 2)2,3. The most frequently used, more specific, lower-level terms (LLTs) were "Myocarditis" (n=97, 69%), "Myopericarditis" (n=15, 11%), "Perimyocarditis" (n=14, 10%) and "Acute myocarditis" (n=10, 7.1%). The reports came from 20 countries, the main contributors being the United States of America (n=50, 35%), the United Kingdom (n=23, 16%), and Germany (n=9, 6.4%).

The included cases were mostly serious (n=132, 94%) and were more often seen in patients aged between 18 and 44 years (n=95, 67%, overall median age = 34) and in males (n=87, 62%). See Table 3 and 4 for an overview of cases by diagnostic certainty and vaccine manufacturer. More were seen after the second dose (n=57, 40%), although this was driven by the mRNA vaccines (Pfizer-BioNTech and Moderna) as no other cases following use of the other vaccines occurred after the second vaccine dose. This will be

affected by the different vaccine programmes, for example, the AstraZeneca vaccine typically has a longer interval between doses and the Janssen vaccine is a one-dose only vaccine. There also seemed to be a shorter time-to-onset (TTO) for cases following the second vaccine dose (median = 3 days, range = 0 to 22 days) compared to the first dose (median = 4 days, range = 0-34 days). This remained true when comparing across categories of diagnostic certainty (see Table 3). The overall TTO for mRNA vaccines seemed to be shorter than that of the other vaccines (Pfizer-BioNTech median = 3 days, and Moderna median = 2 days, compared to AstraZeneca median = 4 days, and Janssen, Sinopharm and Sinovac median = 6 days). The COVID-19 vaccines were the only suspect medication in all cases, and no concomitant medication was reported more than three times.

Patients typically presented with chest pain, sometimes with accompanying fever and shortness of breath after vaccination. The terms “Chest pain” (n=53, 38%), “Troponin increase” (n=35, 25%) and “Pyrexia” (n=34, 24%) were the most common to be co-reported. Thirty-two patients (23%) explained in the narrative that they felt generally unwell with flu-like symptoms post vaccination before developing chest pain a few days later. Fifty two cases (37%) reported perimyocarditis or myopericarditis, either as a LLT included in the preferred term of myocarditis, described in the narrative, or had both of the two preferred terms (PTs) of pericarditis and myocarditis. There were no clear differences in the case demographics or case descriptions of those reporting myopericarditis or perimyocarditis (Table 3). Two of the confirmed cases were diagnosed via biopsy during coronary angiography. One patient presented 12 days after vaccination (dose 1, Pfizer-BioNTech) after suffering nausea, diarrhoea and vomiting, and was found to have a troponin increase with biopsy findings of myocyte damage and mixed inflammatory infiltrate. Another confirmed case presented with myalgia and fever after the AstraZeneca vaccine (TTO and dose unknown), and was found to have ST elevation on ECG, and a biopsy showed an acute neutrophilic myocarditis. The other confirmed case was part of an autopsy where myocarditis and pericarditis were listed as the cause of death in an 81-year-old patient who had been vaccinated with the Pfizer BioNTech vaccine (dose unknown) two days prior to the onset of myocarditis.

Two patients reported having previous myocarditis and one patient reported three episodes of prior pericarditis. There was also one case that occurred alongside a flare of dermatomyositis after vaccination. There were six other patients who had a medical history of autoimmune or inflammatory conditions (Sjögren syndrome, tubulointerstitial nephritis, Crohn's disease, Hashimoto's thyroiditis alongside an undiagnosed possible rheumatological disorder, a possible undiagnosed disorder, and a patient under investigation for possible multiple sclerosis with a positive antinuclear antibodies). Three cases mentioned positive infectious tests (COVID-19, histoplasma and mycoplasma). Sixteen cases (11%) reported previous confirmed or suspected COVID-19 infections, and 20 (14%) had a negative COVID-19 test at the time of symptoms. Eighteen cases (13%) had negative screening for other causes that included viral, bacterial, autoimmune and rheumatological screens, and two further cases were awaiting a screening for other causes. Several cases reported treatment with anti inflammatories such as colchicine and ibuprofen. There were 69 cases (49%) given as recovered or recovering from myocarditis, 29 (21%) were not recovered, four had a fatal outcome (2.8%), and 41 (29%) had an unknown outcome.

Literature and labelling

Myocarditis was initially not mentioned in the product information or literature for any COVID-19 vaccine6–13 . However, the EMA Pharmacovigilance Risk Assessment Committee (PRAC) has recommended to update the product information for both the Pfizer-BioNTech and Moderna vaccines, listing myocarditis and pericarditis as very rare side effects together with a warning to raise awareness among health-care professionals and people taking these vaccines14. Similarly, the FDA has added a warning for both vaccines for myocarditis and pericarditis15 .There is also an increasing number of cases reported in the literature regarding myocarditis after COVID-19 vaccination16–19 . There have also been reports of smallpox vaccine-related myocarditis2,3 and this is noted as an adverse event in the product information20. There are also a few cases of myocarditis following influenza vaccination21-23, but this is less frequently reported22 .

Discussion and conclusion

Myocarditis is more common in males and is typically seen more frequently in young individuals without underlying medical conditions24,25 . This is in line with our case series, where most cases were male, young, and of presumed good health due to lack of recorded concomitant medications. However, in some reporting platforms there is limited opportunity to note concomitant medication. Of interest, 61% of reports in VigiBase giving the patient's gender were for females, and this increased to 74% for all reports regarding the COVID-19 vaccines.

The exact pathophysiology of myocarditis is not fully understood, but it is suggested to have three stages of disease: The first stage, lasting a few days, occurs when the causative agent enters the cardiomyocytes causing cell damage and triggering an innate immune response. The second stage is dominated by an acquired immune response, and in the third stage patients recover or develop a persistent cardiomyopathy26 . The inflammation can occur directly due to cell damage or caused by the immune response26 . With regard to COVID-19, it has been hypothesised that myocarditis can occur due to direct cell invasion via the spike protein interacting with the angiotensin-converting enzyme 2 (ACE2), which is widely expressed and prevalent in cardiomyocytes1,27,28 . However, in cases of COVID-19 related myocarditis, SARS-CoV-2 has not been found in cardiomyocytes, but only in the remaining myocardium, thus the cell injury was thought to be due to the generalised inflammatory response to COVID-19, part of which is Th1 activation29,30 . Studies of myocarditis associated with smallpox vaccination, as well as the case report of myocarditis following the Pfizer-BioNTech vaccination31, have proposed cytokine related inflammation as the mechanism3 . Both mechanisms are unproven but could be plausible for COVID-19 vaccines as they are based on viral spike proteins and stimulate a strong Th1 response32–34 .

The incidence of myocarditis is estimated to be between 10 and 20 per 100,000 persons per year, which is likely to be an under-representation due to sub-clinical cases25 and there has been a surge of patients presenting with COVID-19 related myocarditis1 . The COVID-19 pandemic has also changed healthcare seeking behaviour35,36 , therefore it is difficult to estimate the current background incidence. The limitations of spontaneous reporting mean it is not possible to estimate the incidence of myocarditis following COVID-19 vaccination. From previous studies of vaccine-

associated myocarditis it has been suggested that myocarditis cases following vaccination monitoring through passive surveillance is significantly underestimated3 . The number of reports is highest for the Pfizer-BioNTech and Moderna vaccines and these two vaccines are the only COVID-19 vaccines with statistically significant disproportionate reporting. This strengthens the possibility of an association for these two vaccines but does not confirm it. Interestingly, these two vaccines are the only ones reported here that have reports after the second vaccine dose, with a shorter TTO after the second dose. This suggests a possible dose–response relationship, although the results will be affected by the different vaccine schedules and possibly by geographical variation of vaccine usage. The various vaccination programmes use different vaccines and may have different reporting patterns. As disproportionality varied between countries, the geographical distribution of reporting also requires further investigation, even when stratified by vaccine manufacturer. The cases with a very short TTO were not excluded because of inconsistencies in TTO reporting. In some reporting platforms, for example, it is not possible to record different TTOs for different adverse events.

In conclusion, this case series highlights a potential serious adverse event following vaccination with the COVID-19 vaccines. This association is better defined with the two mRNA vaccines of Pfizer BioNTech and Moderna, with disproportionate reporting and a possible dose–response relationship. There are also plausible mechanisms and a temporal relationship, with similar reactions seen during COVID-19 disease and after smallpox vaccination. This case series does not prove causality of myocarditis by the mRNA vaccines, but it does highlight an area that requires longitudinal follow-up.

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Table 1. Observed and expected calculations for cases, by vaccine manufacturer, in VigiBase, as of5 May 2021

	All reports (n=687,607) (%)	*Observed myocarditis cases*	*Expected myocarditis cases*
Moderna	62,782 (9.1)	51	17 *
Pfizer-BioNTech	249,769 (36)	106	83 *
Janssen	26,965 (3.9)	7	9
AstraZeneca	317,638 (46)	47	106
Sinopharm	3,627 (0.5)	1	1
Sinovac	12,436 (1.8)	1	4

* Statistically significant. N.B. One case with an unspecified COVID-19 vaccine is not included in this table

Table 2. Adapted diagnostic certainty criteria2,3

Possible (n=76)	Probable (n=62)	Confirmed (n=3)

Two of the following criteria*: • ECG changes in line with myocarditis. • Troponin or other cardiac biomarker increased • Echocardiogram suggestive of myocarditis or decreased myocardial function of any age **or** Report from physician where only diagnosis is myocarditis, myopericarditis or perimyocarditis.*	Same criteria as "possible" but with confirmed new changes on Echocardiogram. or MRI findings in keeping with acute myocarditis. or Report or diagnosis is from cardiologist.*	Biopsy or autopsy confirmation of myocarditis.

Table 3. Overview of case demographics of the included cases and by diagnostic certainty

		*All cases (N=210)**	*Included cases (n=141)***	*Possible cases (N=76)*	*Probable cases (n=62)*
Vaccine(%)	Pfizer-BioNTech	105 (50)	72 (51)	33 (43)	37 (60)
	Moderna	49 (23)	36 (26)	23 (30)	13 (21)
	AstraZeneca	47 (22)	29 (21)	18 (24)	10 (16)
	Janssen	5 (2.3)	2 (1.4)	0 (0.0)	2 (3.2)
	Sinopharm	1 (0.5)	1 (0.7)	1 (1.3)	0 (0.0)
	Sinovac	1 (0.5)	1 (0.7)	1 (1.3)	0 (0.0)
	Unknown	2 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)
Age Years (%)	18-44	136 (65)	95 (67)	52 (68)	42 (68)
	45-64	47 (22)	28 (20)	15 (20)	13 (21)
	65-74	13 (6.2)	9 (6.4)	6 (7.9)	3 (4.8)
	75+	5 (2.4)	3 (2.1)	0 (0.0)	1 (1.6)
	Unknown	9 (4.3)	6 (4.3)	3 (3.9)	3 (4.8)
Median age (years) (range)		35 (18-90)	34 (18-81)	32 (18-74)	35 (19-81)
Sex (%)	Male	128 (61)	87 (62)	44 (58)	42 (68)
	Female	80 (38)	52 (37)	31 (41)	19 (31)
	Unknown	2 (0.9)	2 (1.4)	1 (1.3)	1 (1.6)
Dose number (%)	1ST	68 (32)	40 (28)	18 (24)	21 (34)
	2ND	71 (34)	57 (40)	28 (37)	29 (47)
	Unknown	71 (34)	44 (31)	30 (39)	12 (19)
Median TTO (days) (range)		3 (-5–49)	3 (0–34)	3 (0-27)	3 (0-34)
Median TTO (days) per dose (range)	1ST	4 (0-37)	4 (0–34)	5 (0–27)	3.5 (1-34)
	2ND	3 (0-22)	3 (0-22)	3 (1–22)	3 (0-13)
	Unknown	3 (-5–49)	2.5 (0–20)	2 (0-20)	4 (0-20)
Mean TTO (days) per dose (S.D.)	1ST	6.9 (8.1)	6.6 (7.5)	6.1 (6.9)	6.8 (8.1)
	2ND	3.6 (3.6)	3.5 (3.6)	3.9 (4.3)	3.1 (2.8)
	Unknown	5.3 (7.8)	4.6 (5.3)	3.9 (4.9)	6.5 (5.8)

Serious (%)	Serious	195 (93)	132 (94)	69 (91)	60 (97)
Fatal (%)	Fatal	4 (1.9)	3 (2.1)	2 (2.6)	0 (0.0)
Geographic alregion (%)	PAHO	84 (40)	51 (36)	28 (37)	22 (35)
	Europe	122 (58)	88 (62)	47 (62)	40 (65)
	WPR	3 (1.4)	1 (0.7)	0 (0.0)	0 (0.0)
	EMR	1 (0.5)	1 (0.7)	1 (1.3)	0 (0.0)

Abbreviations: TTO – Time-to-onset, SD – Standard deviation, PAHO - Pan American Health Organization, WPR – Western Pacific Region, EMR – Eastern Mediterranean Region

***All cases in VigiBase with duplicates excluded.**

****Included cases are all cases after the exclusion criteria were applied, they were then further categorised to possible, probable or confirmed cases according to the adapted diagnostic certainty criteria.**

***** Cases where perimyocarditis or myopericarditis was used as a lower-level term included in the preferred term of myocarditis, described in the narrative, or had both of the two preferred terms of pericarditis and myocarditis. These cases are taken from the included cases and include possible, probable and confirmed cases.**

5. REGULATORY NOTICES

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था विभाग

COLISTIN औषधिको विक्रीवितरण तथा प्रयोग सम्बन्धि अत्यन्त जरुरी सूचना

(प्रकाशित मिति : २०७९/१०/२९)

विश्व स्वास्थ्य संगठनवाट Reserve Antibiotic को रुपमा वर्गीकरण गरेका औषधिहरु मध्ये COLISTIN औषधि पनि एक हो, जसको अर्थ अन्य वर्गका प्रतिजैविक औषधिले काम नगरेको अवस्थामा मात्र प्रयोग गर्नुपर्छ भन्ने हो। प्रतिजैविक औषधिहरुको दुरुपयोगको कारण Antimicrobial Resistance (AMR) हाल आएर विश्वव्यापी चुनौतिको रुपमा देखा परेको छ। Antimicrobial Resistance (AMR) को प्रमुख कारणहरु मध्ये पशुपन्छीमा प्रतिजैविक औषधिहरुको जथाभावी प्रयोग हुनु पनि एक रहेको छ । बिभागवाट प्रेषण गरिएको WHO को Global Antimicrobial Resistance and Use Surveillance System (GLASS) मा 2016 देखि 2021 सम्मको खपत विवरणमा पनि यस COLISTIN औषधिको अधिक प्रयोग भएको देखिन्छ।

COLISTIN औषधिको अनुचित प्रयोग तथा दुरुपयोग हुनवाट रोक्न अन्य बिभिन्न राष्ट्रहरुका साथै मित्रराष्ट्र बंगलादेश र भारत सरकारले पनि यो औषधि पशुपन्छी, माछा आदिको उपचारमा प्रयोग गर्न नपाईने गरी प्रतिबन्धित गरेको छ। यसै सन्दर्भमा मिति २०७६/०५/०३ मा बसेको औषधि सल्लाहकार समितिको ४९ औ बैठकको निर्णयवाट नेपालमा पनि पशुपन्छीको उपचारमा प्रयोग गरिने COLISTIN को औषधिको दर्ता तथा पैठारीमा तत्काल रोक्ने सिफारिस भएकोमा केहि आयातकर्ताहरुवाट अनाधिकृत रुपमा आयात गरि लुकाईछिपाई सोझै कृषि फर्म/पोल्ट्री फर्महरुमा उपलव्ध गराई प्रयोग भईरहेको सूचना विभागमा प्राप्त भएको छ। यस्ता कार्य औषधि ऐन,२०३५को बर्खिलाप भएकाले त्यस्ता कार्य भए गरेको भएमा अविलम्ब नगर्नु/नगराउनु हुन यसै सूचना मार्फत सुचित गरिन्छ। अन्यथा निरीक्षणका बखत सो कार्य गरिएको पाईएमा औषधि ऐन,२०३५ बमोजिम हदैसम्म कारवाही गरिने व्यहोरा सरोकारवाला सबैमा जानकारीका लागि यो सूचना जारी गरिएको छ।

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
औषधि व्यवस्था विभाग

सूचना

औषधिको बिक्री वितरण प्रमाणपत्र रद्द गरिएको सम्बन्धमा

प्रकाशित मितिः २०७९/०८/२१

Curex Pharmaceuticals Pvt.Ltd., Banepa -10, Kavre, Nepal बाट उत्पादित **MY VIT-C (Ascorbic Acid (Vitamin -C) IP-500mg)** औषधिको विभिन्न व्याचहरु श्री राष्ट्रिय औषधि प्रयोगशालाबाट प्राप्त विश्लेषण प्रतिवेदन अनुसार तोकिएको गुणस्तर नपाईएको हुदाँ मिति २०७९/०८/०९ को विभागीय निर्णयानुसार उक्त औषधिको बजार बिक्री वितरण दर्ता प्रमाणपत्र औषधि ऐन, २०३५ को दफा २०(४) बमोजिम रद्द गरिएको व्यहोरा जानकारीका लागि प्रकाशित गरिएको छ ।

बरिष्ठ औषधि व्यवस्थापक

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
औषधि व्यवस्था विभागको

Ethylene Glycol तथा Diethylene Glycol को प्रयोग सम्वन्धि अत्यन्त जरुरी सुचना

प्रकाशित मितिः २०७९/०८/१२

जाम्बिया तथा इन्डोनेसिया लगायतका देशहरुमा बच्चाहरुमा प्रयोगहुने झोल बनावट (Liquid Dosage form)का औषधिहरुमा Ethylene Glycol तथा Diethylene Glycol जस्ता विषाक्त रसायनयुक्त मिसावटका कारणबाट बच्चाहरुको मृगौलामा गम्भीर प्रतिअसर/दुष्प्रभाव भई मृत्यु भएको पुष्टी बिश्व स्वास्थ्य संगठनको प्रतिवेदनमा उल्लेख छ । यस सन्दर्भमा सो मध्ये Promethazine Oral Solution, Kofexmalin Baby Cough Syrup, Makoff Baby Cough Syrup र Magrip N Cold Syrup को भारतको Maiden Pharmaceuticals Ltd (Haryana, India) उत्पादक रहेको जानकारीमा हुन आएकोमा ति उत्पादक तथा सोका उत्पादनहरु विभागमा दर्ता नभएको व्यहोरा सबैको जानकारीको लागि अनुरोध छ।

यस प्रकारका समस्याहरु भविष्यमा नहोस भन्ने हेतुले propylene glycol, polyehthylene glycol, Sorbitol र Glycerin/Glycerol जस्ता सहायक कच्चा पदार्थहरु प्रयोग भई नेपालमा उत्पादन तथा पैठारी हुने विशेष गरि झोल बनावटका औषधिहरुमा सबै उत्पादकहरु तथा पैठारीकर्ताले आफ्नो उत्पादनमा Ethylene Glycol र Diethylene Glycol को मिसावट नभएको भनि अनिवार्य एकिन गरी मात्र झोल औषधिहरुको बिक्रि बितरण गर्नुहुन यो सूचना प्रकाशित गरिएको छ।

बरिष्ठ औषधि व्यवस्थापक

नेपाल सरकार
स्वास्थ्य तथा जनसंख्या मन्त्रालय
औषधि व्यवस्था विभाग

प्रतिजैविक (ANTIBIOTICS) औषधिहरुको खपत विवरण सम्बन्धि सूचना

प्रकाशित मिति : २०७९/११/०२

उपरोक्त विषयमा यस विभागवाट प्रतिजैविक (**Antibiotics**) औषधिहरुको खपत विवरण सम्बन्धित उत्पादक तथा आयातकर्ताहरुवाट संकलन गरि **WHO** को Global Antimicrobial Resistance and Use Surveillance System **(GLASS)** मा **2016** देखि **2021** सम्मको विवरण पेश भएको व्यहोरा जानकारी गराईन्छ। साथै आगामी दिनमा पनि निरन्तर रुपमा सोको वार्षिक विवरण समयमा नै उपलब्ध गराउनु पर्ने दायित्व रहेको छ।

गत वर्ष जस्तै गरि सन् **2022** मा पनि प्रतिजैविक **(Antibiotics)** औषधिहरुको प्रयोग तथा खपत विवरण विभागले तयार गरेको ढांचामा निम्न ठेगाना **(Address)** मा सूचना प्रकाशित मितिवाट १५ (पन्ध्र) दिन भित्रमा अनिवार्य पेश गर्नु अनुरोध छ।

तपसिलः

Email Address: ddaamcreporting@gmail.com

वरिष्ठ औषधि व्यवस्थापक

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था विभागको

औषधि फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरूरी सूचना

प्रकाशित मिति: २०७९/०८/२७

यस विभागबाट बजार अनुगमनको क्रममा संकलन गरिएका आयुर्वेदिक औषधिहरूका नमुना परिक्षण गर्दा तपसिल बमोजिमको उत्पादकहरूबाट उत्पादित तपसिलको ब्याच नं.को आयुर्वेदिक औषधि न्यून गुणस्तर भएको पाइएकोले औषधि ऐन २०३५ को दफा १४ बमोजिम सो औषधिहरूको बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग तथा तिनका प्रतिनिधिहरुका जानकारीको लागि यो सूचना प्रकाशित गरिएको छ। साथै उक्त आयुर्वेदिक औषधिहरूको सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ।

तपसिल

सि.नं.	औषधिको नाम	ब्याच. नं.	Mfg./Exp. Date	कारण	उत्पादकको नाम र ठेगाना
1.	Avipattikar Churna (100gm)	24	05/2021, Exp: 2 Years from the Mfg Date.	Doesnot comply as per Ayurvedic Pharmacopoeia of India,2016 with respect to Microbial Limit Test	Gorkha Ayurved Company Pvt. Ltd, Gorkha, Nepal
2	Nirmal Churna (100gm)	NRPA 9001	Jul. 2021/ Jun. 2023	Doesnot comply as per Ayurvedic Pharmacopoeia of India, 2016 with respect to Microbial Limit Test.	Bhaskar Herbaceuticals Pvt. Ltd., Chorni, Birgunj, Parsa, Nepal.

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय
औषधि व्यवस्था विभागको

Hand sanitizer फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरूरी सूचना

प्रकाशित मितिः २०७९/०९/४

यस विभागबाट निम्न उत्पादक र ब्याच नं.को Hand sanitizer को नमुना श्री राष्ट्रिय औषधि प्रयोगशाला, काठमाडौंमा परिक्षण गर्दा न्यून गुणस्तर भएकोले उक्त ब्याच नं. को Hand sanitizer औषधि ऐन २०३५ को दफा १४ बमोजिम बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग, आयातकर्ता तथा तिनका प्रतिनिधिहरूका जानकारीको लागि यो सूचना प्रकाशित गरिएको छ। साथै उक्त Hand sanitizer सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ।

तपसिल

सि.नं.	औषधिको नाम	ब्याच. नं.	Mfg./Exp. Date	कारण	उत्पादक/ आयातकर्ताको नाम र ठेगाना
1.	GHC HAND SANITIZER, 5 Ltr.	CARE 121-22	Mfg Date: 08/2022 Exp Date: 07/ 2025	**Doesn't comply** as per standard for instant Hand Sanitizer (Alcohol Based) 2076 (With respect to assay test **Ethanol 64% v/v)**	**उत्पादकः Global Healthcare** Kunjpura, Karnal-132 023, India
2.	GHC HAND SANITIZER, 500ml.	CARE 49-22	Mfg Date: 02/2022 Exp Date: 01/ 2025	**Doesn't comply** as per standard for instant Hand Sanitizer (Alcohol Based) 2076 (With respect to Identification test Positive for **Methanol** & assay test **Methanol 66% v/v)**	**आयातकर्ताः** K.S International, **टेकु काठमाडौं**

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था बिभागको

औषधि फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरुरी सूचना

प्रकाशित मितिः २०७५/०५/११

यस विभागबाट बजार अनुगमनको क्रममा संकलन गरिएका औषधिको नमुना परिक्षण गर्दा देहाय बमोजिमको उत्पादकबाट उत्पादित तपसिलको ब्याच नं. को Infusion औषधि न्यून गुणस्तर भएको पाइएकोले सो औषधि (Infusion) औषधि ऐन, २०३५ को दफा १४ बमोजिम बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग तथा तिनका प्रतिनिधिहरुको जानकारीको लागि यो सूचना प्रकाशित गरिएको छ। साथै उक्त औषधिहरुको सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ।

तपसिलः

सि. नं.	औषधिको नाम	ब्याच. नं.	Mfg./Exp. Date	कारण	उत्पादकको नाम र ठेगाना
1.	PARAHIM (Paracetamol Infusion IP) Each 100ml contains: Paracetamol I.P-1000mg Water for injection I.P q.s	A26WX001	Mfg Date: Jan. 2022 Exp Date: Dec. 2023	Does not comply as per Indian Pharmacopoeia 2018 with respect to test for Particulate matter.	Lomus Parenterals & Formulation Pvt. Ltd. Chireshwarnath Nagarpalika, Ward No-1, Dhanusha, Nepal.

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था बिभागको

औषधि फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरुरी सूचना

प्रकाशित मिति : २०७९/१०/२१

यस विभागबाट बजार अनुगमनको क्रममा संकलन गरिएका औषधिका नमुना श्री राष्ट्रिय औषधि प्रयोगशालाबाट परिक्षण गर्दा तपसिल बमोजिमको उत्पादकबाट उत्पादित तपसिलको ब्याच नं. को औषधि न्यून गुणस्तर भएको पाइएकोले उक्त SYRUP औषधि ऐन २०३५ को दफा १४ बमोजिम बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग तथा तिनका प्रतिनिधिहरुका जानकारीको लागि यो सूचना प्रकाशित गरिएको छ। साथै उक्त औषधिको सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ।

तपसिल:

सि. नं.	औषधिको नाम	ब्याच. नं.	Mfg./Exp. Date	कारण	उत्पादकको नाम र ठेगाना
1.	**ODT Syrup** (Ondansetron Syrup USP) (Each 5ml contains: Ondansetron Hydrochloride USP equivalent to Ondansetron 4 mg)	LOD-019	Jul., 2021/ Jun., 2023	Does not comply as per USP 2021 with respect to Test performed	Curex Pharmaceuticals Pvt. Ltd., Banepa- 10, Kavrepalanchok, Nepal.

नेपाल सरकार

स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था बिभागको

औषधि फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरुरी सूचना

प्रकाशित मितिः २०७८/०९/२७

यस विभागबाट बजार अनुगमनको क्रममा संकलन गरिएका औषधिको नमुना परिक्षण गर्दा तपसिल बमोजिमको उत्पादकबाट उत्पादित तपसिलको ब्याच न. को औषधि न्यून गुणस्तर भएको पाइएकोले सो औषधि औषधि ऐन २०३५ को दफा १४ बमोजिम बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग तथा सम्बन्धित उद्योगको आधिकारिक आयातकर्ता तथा तिनका प्रतिनिधिहरुको जानकारीको लागि यो सूचना प्रकाशित गरिएको छ । साथै उक्त औषधि सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ ।

तपसिलः

सि.न.	औषधिको नाम	ब्याच. न.	Mfg./Exp. Date	कारण	उत्पादकको नाम र ठेगाना
1.	d-pill (Levonorgestrel Tablets IP 1.5mg)	HT20001	July-2020/ June-2022	Does not comply with IP 2018 with respect to Assay.	COOPER PHARMA LIMITED, Dehradhun 248197, Uttarakhand, India

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स्वास्थ्य तथा जनसंख्या मन्त्रालय

औषधि व्यवस्था बिभागको

औषधि फिर्ता (Recall) गर्ने सम्बन्धी अत्यन्त जरूरी सूचना

प्रकाशित मिति: २०७८/०९/०६

यस विभागबाट बजार अनुगमनको क्रममा संकलन गरिएका औषधिको नमुना परिक्षण गर्दा तपसिल बमोजिमको उत्पादकबाट उत्पादित तपसिलको ब्याच न. को औषधि न्यून गुणस्तर भएको पाइएकोले सो औषधि औषधि ऐन २०३५ को दफा १४ बमोजिम बिक्रि वितरण रोक्का गरि बजारबाट तुरुन्त फिर्ता (Recall) गर्न र सोको विवरण यस विभागमा पेश गर्न सम्बन्धित उद्योग तथा सम्बन्धित उद्योगको आधिकारिक आयातकर्ता तथा तिनका प्रतिनिधिहरुको जानकारीको लागि यो सूचना प्रकाशित गरिएको छ । साथै उक्त औषधि सिफारिस, बिक्रि वितरण तथा प्रयोग समेत नगर्न र नगराउनु हुन सम्बन्धित सबैलाई अनुरोध छ ।

तपसिल

सि.न.	औषधिको	ब्याच. न.	Mfg./Exp. Date	कारण	उत्पादकको नाम र ठेगाना
1.	TRIMOX-250 (Amoxycillin Trihydrate Capsules IP)	D20E010X	May-2020/ Apr-2022	Does not comply with IP 2018 with respect to Weight Variation.	Mapra Laboratories Pvt. Ltd., Daman, Mumbai, India

औषधि प्रयोग गर्दा ध्यान दिनुपर्ने कुराहरू:

- मान्यता प्राप्त स्वास्थ्यकर्मीको पूर्जामा मात्र औषधि प्रयोग गर्ने ।
- औषधिको प्रयोग सम्बन्धि पूर्ण जानकारी लिने ।
- औषधिको सेवन तोकिएको समयमा, तोकिए बमोजिमको फरकमा, तोकिएको समयसम्म प्रयोग गर्ने ।
- औषधि बालबच्चाको पहुँचबाट टाढा राख्ने ।
- यदि कुनै औषधि सेवन गर्न भूलेमा सम्झने बित्तिक्कै सेवन गर्ने तर अर्को मात्रा सेवन गर्ने समय नजिक भएमा सेवन नगरी अर्को मात्रा सेवन गर्ने ।
- आफू गर्भवती भएमा सो बारे स्वास्थ्यकर्मीलाई जानकारी दिने ।
- औषधि प्रयोग गर्दा जिउ चिलाएमा, छालामा डाबरहरु आएका, स्वास फेर्न गाह्रो भएमा वा यस्तै अन्य लक्षण देखा परेमा तुरुन्त औषधि प्रयोग गर्न छाडी स्वास्थ्यकर्मीलाई सम्पर्क राख्ने ।

एण्टिबायोटिक औषधि प्रयोग गर्दा मान्यता प्राप्त स्वास्थ्यकर्मीको सल्लाहमा तोकिएको अवधि र समयभित्र प्रयोग गरौं र गराऔं ।

औषधि सम्बन्धि थप जानकरीका लागि तल उल्लेखित ठेगानामा सम्पर्क राख्नुहोला ।

औषधि व्यवस्था विभाग

मदनभण्डारी पथ-४, बिजुलीबजार, काठमाडौं

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औषधि व्यवस्था विभागका शाखा कार्यालय

	कञ्चनबारी, विराटनगर	आदर्शनगर, वेपालगंज	मुरली बजैचा, विरगंज
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E-mail:	biratnagar@dda.gov.np	nepalgunj@dda.gov.np	birgunj@dda.gov.np

For further information, please contact:

Government of Nepal Ministry of Health and Population

Department of Drug Administration (DDA)

Madan Bhandari Path-4, Bijulibazar, New Baneshwor, Kathmandu Phone: 01-4791027, 4790432, Fax: 01-4790572

E-mail:info@dda.gov.np

dg@dda.gov.np

Website: www.dda.gov.np

National Medicines Laboratory (NML)

Madan Bhandari Path-4, Bijulibazar, New Baneshwor, Kathmandu Phone: 01-4781269, Fax:01-4780664

E-mail: nml@dda.gov.np

DDA Branch Offices

Kanchanbari, Biratnagar
Koshi Zone
Tel/Fax: 021-420849
E-mail: biratnagar@dda.gov.np

Adarshnagar, Surkhet Road
Nepalgunj, Bheri Zone
Tel/Fax:081-522074
E-mail: nepalgunj@dda.gov.np

Murali Bagaicha, Birgunj, Parsa
Narayani Zone
Tel/Fax: 051-527753
E-mail: birgunj@dda.gov.np

For further information, Please visit www.dda.gov.np

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