1. Name of the medicinal product

Vono-Q 20mg Tablets

2. Qualitative and quantitative composition

Each film-coated tablet contains:
Vonoprazan……..20mg
(As Vonoprazan fumarate)

3. Pharmaceutical form

Film-coated tablet

A green, oval shape, film-coated tablet with Indus engraved on one side and other side have bisect line

4. Clinical particulars

4.1 Therapeutic indications
Vono-Q (Vonoprazan) is indicated for:
1. Gastric ulcer, duodenal ulcer, reflux esophagitis, prevention of recurrence of gastric or duodenal ulcer during low-dose aspirin administration, prevention of recurrence of gastric or duodenal ulcer during non-steroidal anti-inflammatory drug (NSAID) administration.
2. Adjunct to *Helicobacter pylori* eradication in the following settings:
Gastric ulcer, duodenal ulcer, gastric mucosa-associated lymphatic tissue (MALT) lymphoma, idiopathic thrombocytopenic purpura, the stomach after endoscopic resection of early stage gastric cancer or Helicobacter pylori gastritis.

4.2 Posology and method of administration Posology

Gastric ulcer and duodenal ulcer
The usual adult dosage for oral use is 20mg of Vono-Q (Vonoprazan) administered orally once daily an 8 week treatment for gastric ulcer and a 6 week treatment for duodenal ulcer

Reflux esophagitis
The usual adult dose for oral use is 20mg of Vono-Q (Vonoprazan) administered once daily for a total of 4 weeks of treatment. If that dosing proves insufficient, the administration should be extended, but for no longer than 8 weeks of treatment.

For the maintenance therapy of reflux esophagitis showing recurrence and recrudescence, the dose for oral use is 10mg of Vono-Q (Vonoprazan) once daily. However, when the efficacy is inadequate, the dosage may be increase up to 20mg of Vono-Q (Vonoprazan) once daily.

Prevention of recurrence of gastric or duodenal ulcer during low-dose aspirin administration
The usual adult dosage is one tablet of 10mg of Vono-Q (Vonoprazan) administered orally once daily.

Prevention of recurrence of gastric or duodenal ulcer during non-steroidal anti-inflammatory drug (NSAID) administration
The usual adult dosage is one tablet of 10mg of Vono-Q (Vonoprazan) administered orally once daily

Adjunct to Helicobacter pylori eradication
For adults, the following three-drug regimen should be administered orally at the same time twice daily for seven days: 20mg of Vono-Q (Vonoprazan), 750mg of amoxicillin hydrate and 200mg of clarithromycin. The dose of clarithromycin may be increased as clinically warranted. However, dosage should not exceed 400mg twice daily. If *Helicobacter pylori* eradication with a three-drug regimen comprising a proton pump inhibitor, amoxicillin hydrate and clarithromycin has been unsuccessful, as an alternative treatment, adults should be administered the following three drugs orally twice daily for seven days: 20mg of Vono-Q (Vonoprazan), 750mg of amoxicillin hydrate and 250mg of metronidazole.

4.3 Contraindications
Vono-Q is contraindicated in:
• Patients with hypersensitivity to Vonoprazan or to any excipient of the product.
• Patients receiving atazanavir sulphate, nelfinavir or rilpivirine hydrochloride.

4.4 Special warnings and precautions for use
At the treatment, the course of the disease should closely be observed and the minimum therapeutic necessity should be used according to the disease condition. In the long-term, treatment with Vonoprazan, close observation by such means as endoscopy should be made.
In the maintenance of healing of reflux esophagitis, Vonoprazan should be administered only to the patients who repeat recurrence and recrudescence of the condition. Administration to the patients who do not necessitate maintenance of healing should be avoided.
When the healing is maintained over a long period and when there is no risk of recurrence, the dose reduction to a dose of 10mg from a dose 20mg, or suspension of administration should be considered

4.5 Interaction with other medicinal products and other forms of interaction

CYP3A4 inhibitors

Clarithromycin etc.

Blood conc. of Vonoprazan may increase.

Mechanism & Risk Factors

It has been reported that blood conc. of Vonoprazan increased in concomitant use with clarithromycin.

Digoxin, Methyldigoxin

Effect of these drugs may be enhanced.

Mechanism & Risk Factors

Gastric antisecretory effect of Vonoprazan may inhibit hydrolysis of digoxin, resulting in increase in the blood concentration of digoxin.

Itraconazole, Tyrosine kinase inhibitors Gefitinib, Nilotinib, Erlotinib Effect of these drugs may be diminished.

Mechanism & Risk Factors

Gastric antisecretory effect of Vonoprazan may lead to a decrease in the blood concentration of these drugs.

4.6 Fertility, pregnancy and lactation Pregnancy

Vonoprazan should be used in pregnant women or women having possibilities of being pregnant only if the expected therapeutic benefit is thought to outweigh any possible risk.

It is advisable to avoid the administration of Vonoprazan to nursing mothers. However, when the administration is indispensable, nursing should be discontinued

4.7 Effects on ability to drive and use machines
Vono Tablets does not affect the ability to drive or operate machinery.

4.8 Undesirable effects
Following adverse reactions have been reported with the use of Vonoprazan: Diarrhea, constipation, drug hypersensitivity (including anaphylactic shock), drug eruption, urticaria, hepatotoxicity, jaundice, rash, nausea, abdominal distension, gamma-glutamyl transferase increased, AST increased, Liver function test abnormal, ALT increased, ALP increased, LDH increased, γ - GPT increased, edema and eosinophilia.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product.

4.9 Overdose
There is no experience of overdose with Vonoprazan. Vonoprazan is not removed from the circulation by hemodialysis. If overdose occurs, treatment should be symptomatic and supportive

5. Pharmacological properties

5.1 Pharmacodynamic properties

Mechanism of Action

A02BC08 - vonoprazan ; Belongs to the class of potassium-competitive acid blocker. Used in the treatment of peptic ulcer and gastro-oesophageal reflux disease (GERD).

Vonoprazan is a potassium competitive acid blocker (P-CAB) and does not require activation by acid. It inhibits H+, K+-ATPase in a reversible and potassium-competitive manner. Vonoprazan has a strong basicity and resides on the acid production site of gastric parietal cells for a long time, thereby inhibiting gastric acid production. Vonoprazan exerts a strong inhibitory effect on formation of mucosal damage in upper part of the gastrointestinal tract. Vonoprazan does not exhibit anti-Helicobacter pylori activity nor inhibitory activity against *Helicobacter pylori urease.*

Adjunctive effect on eradication of Helicobacter pylori:

The role of Vonoprazan in the *Helicobacter pylori* eradication is considered to increase intragastric pH leading to the enhancement of antibacterial activity of amoxicillin hydrate, clarithromycin and metronidazole which are concomitantly administered.

5.2 Pharmacokinetic properties

Pharmacokinetics at consecutive administration of a daily dose of 10mg or 20mg of Vonoprazan in healthy adult male subjects once daily for 7 days, AUC (0-tau) and C_{max} increase as the dose increases. The degree of these increases is slightly higher than the dose ratio. It is considered that the steady state has been reached by day 3 of administration, since the trough level of the blood concentration of Vonoprazan is constant between day 3 and day 7 of administration. In addition, it is considered that pharmacokinetics of Vonoprazan at consecutive administration may not be time-dependent, as the result of the evaluation of accumulation with regard to $AUC_{(0\text{-}tau)}$ and $T_{1/2}$ of Vonoprazan.

Dose condition	10m	20mg
T_{max} (h)	1.5 [g] (0.75,	1.5 (0.75, 3.0)
C_{max} (ng/ml)	3.0) 12.0 ± 1.8	26.3 ± 6.6
$T_{1/2}$ (h)	7.0 ± 1.6	6.1 ± 1.2
$AUC_{(0\text{-}tau)}$ (ng.h/ml)	79.5 ± 16.1	151.6 ± 40.3

Mean ± S.D. of 9 subjects [T_{max} is expressed by the median (minimum value, maximum value)]

Absorption

Absolute bioavailability has not been determined. The pharmacokinetic parameters of Vonoprazan following single administration of Vonoprazan to healthy adult male subjects at 20mg under fasting and fed conditions are presented in the table as follows:

Dose	Under	After meal
T_{max} (h)	1.5 (0.75,	3.0 (1.0, 4.0)
C_{max} (ng/ml)	24.3 ± 6.6	26.8 ± 9.6
$T_{1/2}$ (h)	7.7 ± 1.0	7.7 ± 1.2
$AUC_{(0\text{-tau})}$ (ng.h/ml)	222.1 ± 69.7	238.3 ± 71.1

Mean ± S.D. of 12 subjects [T_{max} is expressed by the median (minimum value, maximum value)]

Distribution

The protein binding rate is 85.2 to 88.0% when [14 C] Vonoprazan in the range of 0.1 to 10µg/mL is added to human plasma (*in vitro*).

Metabolism

Vonoprazan is metabolized mainly by hepatic drug-metabolizing enzyme CYP3A4 and partially by CYP2B6, CYP2C19 and CYP2D6. Vonoprazan is also metabolized by sulfotransferase SULT2A1 *(in vitro)*.

Vonoprazan exhibits time-dependent inhibitory effect on CYP2B6, CYP2C19 and CYP3A4/5 *(in vitro)*. In addition, Vonoprazan shows a slight concentration-dependent inductive effect on CYP1A2 but it shows little inductive effect on CYP2B6 and CYP3A4/5 *(in vitro)*.

Elimination

When radioactive-labelled drug (15mg as Vonoprazan) is orally administered to healthy adult male subjects, 98.5% of the radioactivity administered is excreted into urine and feces by 168 hours after administration: 67.4% into urine and 31.1% into feces.

5.3 Preclinical safety data None stated

6. Pharmaceutical particulars

6.1 List of excipients D-Mannitol

Microcrystalline Cellulose 101

Hydroxypropyl cellulose

Croscarmellose Sodium

Fumaric acid

Magnesium Stearate

Insta coat universal IC-U 1308 (HPMC)

Iron Oxide Yellow

6.2 Incompatibilities Not applicable **6.3 Shelf life** 2 years **6.4 Special precautions for storage**

Store Below 30°C, Protect from light and moisture

6.5 Nature and contents of container
Each printed box of Vono-Q 20mg Tablets contains ALU/PVC blister strips of 10 Tablets (2 x 5's Tablets) along with the package Inserts

6.6 Special precautions for disposal and other handling No special requirements for disposal.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. Marketing authorisation holder Indus Pharma Pvt. Ltd.

Plot No 26,27,64,65,66 & 67 Sector – 27, Korangi Industrial Area, Karachi – 749008.

8. Marketing authorisation number(s)

N/A

9. Date of first authorisation/renewal of the authorisation

N/A

10. Date of revision of the text

N/A