

# TROMBO-STOP (Film-Coated Tablets)

## Clopidogrel + Aspirin (75/75, 75/100, 75 /150) mg

### COMPOSITION AND EXCIPIENTS :

Each film-coated tablet contains :

- Clopidogrel (as Hydrogen Sulphate)75 mg/Aspirin 75 mg.
- Clopidogrel (as Hydrogen Sulphate)75 mg/Aspirin 100 mg.
- Clopidogrel (as Hydrogen Sulphate)75 mg/Aspirin 150 mg.

**Excipients:** Mannitol, Microcrystalline cellulose, Aerosil, Croscarmellose sodium, Stearic acid, Lactose, HPC, PEG 6000, Titanium dioxide, Eudragit E100, Talc.

### DESCRIPTION:

Trombo-Stop is a fixed-dose combination of clopidogrel and aspirin. Clopidogrel selectively inhibits the binding of adenosine diphosphate (ADP) to its platelet receptor and the subsequent ADP-mediated activation of the glycoprotein (GP) IIb/IIIa complex, thereby inhibiting platelet aggregation. Clopidogrel also inhibits platelet aggregation induced by agonists other than ADP by blocking the amplification of platelet activation by released ADP.

Aspirin is also an antiplatelet agent, which acts by causing irreversible inhibition of the cyclooxygenase enzyme. This leads to decreased formation of thromboxane A<sub>2</sub>.

### PHARMACOKINETICS:

#### • Clopidogrel:

Clopidogrel is a prodrug and is metabolized to a pharmacologically active metabolite and inactive metabolites.

**Absorption:** After single and repeated oral doses of 75 mg per day, clopidogrel is rapidly absorbed. Absorption is at least 50%, based on urinary excretion of clopidogrel metabolites.

**Effect of Food:** Clopidogrel can be administered with or without food.

**Metabolism:** Clopidogrel is extensively metabolized by two main metabolic pathways.

**Excretion:** Following an oral dose of C-labeled clopidogrel in humans, approximately 50% of total radioactivity was excreted in urine and approximately 46% in feces over the 5 days post-dosing. After a single, oral dose of 75 mg, clopidogrel has a half-life of approximately 6 hours. The half-life of the active metabolite is about 30 minutes.

#### • Aspirin:

**Absorption:** Non - ionised acetylsalicylic acid is absorbed from the stomach. There is also absorption of acetylsalicylates from the intestines.

**Distribution:** Aspirin appears rapidly in all body tissues. It does cross the placenta and appears in breast milk and it is moderately bound to plasma proteins.

**Excretion:** Excretion is a salicylic acid and as compounds in the urine and increases as the pH rises.

### INDICATIONS:

Trombo-Stop is indicated for :

- The prevention of ischemic events, myocardial infarction, stroke and cardiovascular death in patients with acute coronary syndrome (ACS).
- Unstable angina (UA) or non-ST elevation myocardial infarction (NSTEMI) in order to prevent early and long-term Atherothrombotic events (myocardial infarction, stroke, vascular death or refractory ischemia).

- Treatment of ACS whether or not patients undergo cardiac revascularisation (surgical or PCI, with or without stent).

- ST-segment elevation acute myocardial infarction (STEMI) in order to prevent atherothrombotic events. In this population, **Trombo-Stop** has been shown to reduce the rate of death from any cause and the rate of a combined endpoint of death, re-infarction or stroke in medically treated patients eligible for thrombolytic therapy.

### DOSE AND ADMINISTRATION:

The recommended dose is one tablet of Trombo-Stop once daily.

#### Acute Coronary Syndrome:

-Loading dose: Four tablets of Trombo-Stop 75 / 75 mg.

-Maintenance dose: One tablet of Trombo-Stop 75/150 or 75/100 daily. CYP2C19 Poor Metabolizers: CYP2C19 poor metabolizer status is associated with diminished antiplatelet response to clopidogrel. Although a higher dose regimen in poor metabolizers increases antiplatelet response, an appropriate dose regimen for this patient population has not been established.

**Use with Proton-Pump Inhibitors:** Avoid using omeprazole or esomeprazole with clopidogrel. Omeprazole and esomeprazole significantly reduce the antiplatelet activity of clopidogrel. When concomitant administration of a proton-pump inhibitor (PPI) is required, consider using another acid-reducing agent with minimal or no CYP2C19 inhibitory effect on the formation of clopidogrel active metabolite.

### CONTRAINDICATIONS:

- Hypersensitivity to clopidogrel, salicylates or any of the excipients or other non-steroidal anti-inflammatory drugs (NSAIDs).
- Severe hepatic impairment.
- Severe renal impairment.
- Active pathological bleeding such as hemophilia, intracranial hemorrhage, gastrointestinal bleeding or other kinds of bleeding such as cerebrovascular hemorrhages.
- Active peptic ulceration or past history of ulceration or dyspepsia.
- Patients who are suffering from gout.
- Third trimester of pregnancy.
- Concurrent anticoagulant therapy should be avoided.
- Nasal polyps associated with asthma (high risk of severe sensitivity reactions).
- Aspirin doses >100 mg/day during the third trimester of pregnancy; Methotrexate used at doses >15mg/week.

### WARNINGS AND PRECAUTIONS:

**General:** General Risk of Bleeding.

**Clopidogrel:** Thienopyridines, including clopidogrel, increase the risk of bleeding. If a patient is to undergo surgery and an antiplatelet effect is not desired, discontinue clopidogrel five days prior to surgery.

In patients who stopped therapy more than five days prior to coronary artery bypass graft (CABG) the rates of major bleeding were similar (event rate: 4.4% clopidogrel + aspirin; 5.3% placebo + aspirin). In patients who remained on therapy within five days of CABG, the major bleeding rate was 9.6% for clopidogrel + aspirin, and 6.3% for placebo + aspirin. Thienopyridines inhibit platelet aggregation for the lifetime of the platelet

(7-10 days), so withholding a dose will not be useful in managing a bleeding event or the risk of bleeding associated with an invasive procedure. Because the half-life of clopidogrel's active metabolite is short, it may be possible to restore hemostasis by administering exogenous platelets; however, platelet transfusions within 4 hours of the loading dose or 2 hours of the maintenance dose may be less effective. Patients should be told that it might take longer than usual to stop bleeding when they take clopidogrel (alone or in combination with aspirin), and that they should report any unusual bleeding (site or duration) to their physician.

**Aspirin:** There is an increased risk of hemorrhage particularly during or after operative procedures (even in cases of minor procedures, e.g. tooth extraction). Use with caution before surgery, including tooth extraction. Temporary discontinuation of treatment may be necessary.

Aspirin 75 mg is not recommended during menorrhagia where it may increase menstrual bleeding. Aspirin 75 mg is to be used with caution in cases of hypertension and when patients have a past history of gastric or duodenal ulcer or hemorrhagic episodes or are undergoing therapy with anticoagulants. patients should report any unusual bleeding symptoms to their physician. If gastrointestinal bleeding or ulceration occurs the treatment should be withdrawn.

**Discontinuation of Clopidogrel:** Avoid lapses in therapy, and if clopidogrel must be temporarily discontinued, restart as soon as possible. Premature discontinuation of clopidogrel may increase the risk of cardiovascular events.

**Patients with Recent Transient Ischemic Attack or Stroke :** In patients with recent transient ischemic attack (TIA) or stroke who are at high risk for recurrent ischemic events, the combination of aspirin and clopidogrel has not been shown to be more effective than clopidogrel alone, but the combination has been shown to increase major bleeding.

**Thrombotic Thrombocytopenic Purpura:** Thrombotic thrombocytopenic purpura (TTP), sometimes fatal, has been reported following use of clopidogrel, sometimes after a short exposure (<2 weeks). TTP is a serious condition that requires urgent treatment, including plasmapheresis (plasma exchange). It is characterized by thrombocytopenia, microangiopathic hemolytic anemia (schistocytes seen on peripheral smear), neurological findings, renal dysfunction, and fever.

**Acquired Hemophilia:** Acquired hemophilia has been reported following use of clopidogrel. In cases of confirmed isolated activated partial thromboplastin time (aPTT) prolongation with or without bleeding, acquired hemophilia should be considered. Patients with a confirmed diagnosis of acquired hemophilia should be managed and treated by specialists, and clopidogrel should be discontinued.

**Cross-Reactivity among Thienopyridines:** Hypersensitivity, including rash, angioedema or hematologic reaction, has been reported in patients receiving clopidogrel, including patients with a history of hypersensitivity or hematologic reaction to other thienopyridines.

### DRUG INTERACTIONS:

#### • Clopidogrel:

**CYP2C19 Inhibitors:** Clopidogrel is metabolized to its active metabolite in part by CYP2C19.

Concomitant use of certain drugs that inhibit the activity of this enzyme results in reduced plasma concentrations of the active metabolite of clopidogrel and a reduction in platelet inhibition.

**Proton Pump Inhibitors:** Avoid concomitant use of clopidogrel with omeprazole or esomeprazole.

In clinical studies, omeprazole was shown to reduce the antiplatelet activity of clopidogrel when given concomitantly or 12 hours apart. A higher dose regimen of clopidogrel concomitantly administered with omeprazole increases antiplatelet response; an appropriate dose regimen has not been established. A similar reduction in antiplatelet activity was observed with esomeprazole when given concomitantly with clopidogrel.

Consider using another acid-reducing agent with minimal or no CYP2C19 inhibitory effect on the formation of clopidogrel active metabolite. Dexamproprazole, lansoprazole and pantoprazole had less effect on the antiplatelet activity of clopidogrel than did omeprazole or esomeprazole.

**Non-steroidal Anti-Inflammatory Drugs:** Coadministration of clopidogrel and non-steroidal anti-inflammatory drugs (NSAIDs) increases Clopidogrel should be used with caution in patients who receive concomitant GP IIb/IIIa inhibitors.

**Acetylsalicylic Acid:** Aspirin did not modify the clopidogrel-mediated inhibition of ADP-induced platelet aggregation, but clopidogrel potentiated the effect of aspirin on collagen-induced platelet aggregation. However, concomitant administration of 500 mg of aspirin twice a day for one day did not significantly increase the prolongation of bleeding time induced by clopidogrel intake. pharmacodynamic interaction between clopidogrel and acetylsalicylic acid is possible, leading to increased risk of bleeding. Therefore, concomitant use should be undertaken with caution. However, clopidogrel and aspirin have been administered together for up to one year.

**Heparin:** In a clinical study conducted in healthy subjects, clopidogrel did not necessitate modification of the heparin dose or alter the effect of heparin on coagulation. Co-administration of heparin had no effect on the inhibition of platelet aggregation induced by clopidogrel. A pharmacodynamic interaction between the combination and heparin is possible, leading to increased risk of bleeding. Therefore, concomitant use should be undertaken with caution.

**Oral Anticoagulants :** The concomitant administration of clopidogrel with oral anticoagulants is not recommended since it may increase the intensity of bleeding. Although the administration of clopidogrel 75 mg/day did not modify the pharmacokinetics of S-warfarin (a CYP2C9 substrate) or international normalized ratio (INR) in patients receiving long-term warfarin therapy, coadministration of clopidogrel with warfarin increases the risk of bleeding because of independent effects on hemostasis. However, at high concentrations in vitro, clopidogrel inhibits CYP2C9.

**Thrombolytics:** The safety of the concomitant administration of clopidogrel, fibrin or non-fibrin specific thrombolytic agents and heparins was assessed in patients with acute MI. The incidence of clinically significant bleeding was similar to that observed when thrombolytic agents and heparin are co-administered with aspirin.

**Selective Serotonin-Reuptake Inhibitors and Serotonin Norepinephrine-Reuptake Inhibitors:** Since selective serotonin-reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) affect platelet activation, the concomitant administration of SSRIs and SNRIs

with clopidogrel may increase the risk of bleeding.

#### • Aspirin:

**Anticoagulants (e.g. coumarin, heparin, warfarin):** Concomitant administration of two agents increase the risk of bleeding due to inhibited thrombocyte function, injury of the duodenal mucosa and displacement of oral anticoagulants from their plasma protein binding sites. Bleeding time should be monitored.

**Anti-platelet Agents (e.g. clopidogrel and dipyridamole) and selective serotonin reuptake inhibitors (SSRIs; such as sertraline or paroxetine):** Addition of these agents increases the risk of gastrointestinal bleeding.

**Antidiabetics (e.g. sulphonylureas):** Salicylics may increase the hypoglycemic effect of sulphonylureas.

**Digoxin and Lithium:** Acetylsalicylic acid impairs the renal excretion of digoxin and lithium, resulting in increased plasma concentrations. Monitoring of plasma concentrations of digoxin and lithium is recommended when initiating and terminating treatment with acetylsalicylic acid. Dose adjustment may be necessary.

**Diuretics and Antihypertensives:** NSAIDs may decrease the antihypertensive effects of diuretics and other antihypertensive agents. As for other NSAIDs concomitant administration with ACE inhibitors increases the risk of acute renal insufficiency. Risk of acute renal failure due to the decreased glomerular filtration via decreased renal prostaglandin synthesis. Hydrating the patient and monitoring renal function at the start of the treatment is recommended.

**Carbonic Anhydrase Inhibitors (e.g. acetazolamide):** May result in severe acidosis and increased central nervous system toxicity.

**Systemic Corticosteroids:** The risk of gastrointestinal ulceration and bleeding may be increased when acetylsalicylic acid and corticosteroids are co-administered.

**Methotrexate (used at doses <15 mg/week):** The combined drugs, methotrexate and acetylsalicylic acid may increase hematological toxicity of methotrexate due to decreased renal clearance of methotrexate by acetylsalicylic acid. Weekly blood count checks should be done during the first weeks of the combination. Enhanced monitoring should take place in the presence of even mildly impaired renal function, as well, as in elderly.

**Other NSAIDs:** Increased risk of ulcerations and gastrointestinal bleeding due to synergistic effects.

**Valproate:** Acetylsalicylic acid has been reported to decrease the binding of valproate to serum albumin, thereby increasing its free plasma concentrations at steady state.

**Phenytin:** Salicylate diminishes the binding of phenytoin to plasma albumin. This may lead to decreased total phenytoin levels in plasma, but increased free phenytoin fraction. The unbound concentration, and thereby the therapeutic effect, does not appear to be significantly altered.

**Ibuprofen:** Experimental data suggest that ibuprofen may inhibit the effect of low dose acetylsalicylic acid on platelet aggregation when they are dosed concomitantly. However, the limitations of these data and the uncertainties regarding extrapolation of ex vivo data to the clinical situation imply that no firm conclusions can be made for regular ibuprofen use, and no clinically relevant effect is considered to be likely for occasional ibuprofen use.

**Ciclosporin, tacrolimus:** Concomitant use of NSAIDs and ciclosporin or tacrolimus may increase the nephrotoxic effect of ciclosporin and tacrolimus. The renal function should be monitored in case of concomitant use of these agents and acetylsalicylic acid.

**Alcohol:** Concomitant administration of alcohol and acetylsalicylic acid increases the risk of gastrointestinal bleeding.

**Antacids:** Antacids will reduce the effect of aspirin. Principle incompatibilities are iron salts, carbonates and alkali hydroxides.

**Renal Impairment:** Experience with clopidogrel is limited in patients with severe and moderate renal impairment. Aspirin needs to be avoided in patients with severe renal failure (glomerular filtration rate < 10 mL/min). Aspirin should be used with caution in patients with moderately impaired renal function or in patients who are dehydrated since the use of NSAIDs may result in deterioration of renal function.

**Hepatic Impairment:** Dose adjustment of clopidogrel is not necessary in patients with hepatic impairment. Aspirin needs to be avoided in patients with severe hepatic impairment. Aspirin should be used with caution in patients with moderately impaired hepatic function. Liver function tests should be performed regularly in patients presenting slight or moderate hepatic insufficiency.

**PREGNANCY : Category C**

**Clopidogrel:** There are no adequate and well-controlled studies with clopidogrel in pregnant women. Clopidogrel should be used during pregnancy only if clearly needed.

#### • Aspirin:

**Low doses (up to 100 mg/day):** Clinical studies indicate that doses up to 100 mg/day for restricted obstetrical use, which require specialised monitoring, appear safe.

**Doses of 100- 500 mg/day:** There is insufficient clinical experience regarding the use of doses above 100 mg/day up to 500 mg/day. Therefore, the recommendations below for doses of 500 mg/day and above apply also for this dose range.

**Doses of 500 mg/day and above:** Inhibition of prostaglandin synthesis may adversely affect the pregnancy and/or the embryo/fetal development.

• If acetylsalicylic acid is used by a woman attempting to conceive, or during the first and second trimester of pregnancy, the dose should be kept as low and duration of treatment as short as possible.

• **During the third trimester of pregnancy,** all prostaglandin synthesis inhibitors may expose the fetus to: cardiopulmonary toxicity (with premature closure of the ductus arteriosus and pulmonary hypertension); renal dysfunction, which may progress to renal failure with oligo-hydroamniosis.

• **the mother and the neonate at the end of pregnancy to:** possible prolongation of bleeding time, an anti-aggregating effect which may occur even at very low doses , inhibition of uterine contractions resulting in delayed or prolonged labour.

Consequently, acetylsalicylic acid at doses of 100 mg/day and higher is contraindicated during the third trimester of pregnancy.

**LACTATION:** It is not known whether clopidogrel is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from clopidogrel, a decision should be made whether to discontinue nursing or to discontinue clopidogrel, taking into account the importance of the drug to the mother.



Low quantities of salicylates and of their metabolites are excreted into the breast milk. Since adverse effects for the infant have not been reported up to now, short-term use of the recommended dose does not require suspending breastfeeding. In cases of long-term use and/or administration of higher doses, breastfeeding should be discontinued.

**Pediatric Use:** Safety and effectiveness of clopidogrel in the pediatric population have not been established. Aspirin is not recommended for use in adolescents/children under 16 years unless the expected benefits outweigh the risks. Acetylsalicylic acid may be a contributory factor in the causation of Reye's Syndrome in some children.

**Geriatric Use:** No dosage adjustment of clopidogrel is necessary in elderly patients.

Elderly patients are particularly susceptible to the adverse effects of NSAIDs, including acetylsalicylic acid especially gastrointestinal bleeding and perforation which may be fatal. Where prolonged therapy is required, patients should be reviewed regularly.

### UNDESIRABLE EFFECTS:

**Clopidogrel:** Bleeding , TTP .

Some adverse events that were reported include : thrombocytopenia, leucopenia, neutropenia (including severe neutropenia), granulocytopenia, anemia, cross-reactive drug hypersensitivity among thienopyridines (such as ticlopidine, prasugrel), paresthesia, dizziness, vertigo, abdominal pain, dyspepsia, gastritis, vomiting, nausea, constipation, flatulence, gynecostasia, glomerulonephritis, hematuria.

### OVERDOSAGE:

**Clopidogrel:** Platelet inhibition by clopidogrel is irreversible and will last for the life of the platelet.

Overdose following clopidogrel administration may result in bleeding complications.

Symptoms of acute toxicity were vomiting, prostration, difficult breathing, and gastrointestinal hemorrhage.

Based on biological plausibility, platelet transfusion may restore clotting ability.

**Aspirin:** Salicylate poisoning is usually associated with plasma concentrations >350 mg/L (2.5 mmol/L).

Most adult deaths occur in patients whose concentrations exceed 700 mg/L (5.1 mmol/L).

Single doses less than 100 mg/kg are unlikely to cause serious poisoning. Common features of salicylate poisoning include vomiting, dehydration, tinnitus, vertigo, deafness, sweating, warm extremities, increased respiratory rate and hyperventilation. Some degree of acid-base disturbance is present in most cases. A mixed respiratory alkalosis and metabolic acidosis with normal or high arterial pH (normal or reduced hydrogen ion concentration) is usual in adults and children over the age of 4 years. In children aged 4 years or less, a dominant metabolic acidosis with low arterial pH (raised hydrogen ion concentration) is common. Acidosis may increase salicylate transfer across the blood brain barrier.

Uncommon features of salicylate poisoning include hematemesis, hyperpyrexia, hypoglycemia, hypokalemia, thrombocytopenia, increased INR/ PTR, intravascular coagulation, renal failure and non-cardiac pulmonary edema.

Central nervous system features including confusion, disorientation, coma and convulsions, are less common in adults than in children. Give activated charcoal if an adult presents within one hour of ingestion of more than 250 mg/kg.

Elimination is increased by urinary alkalinisation, which is achieved by the administration of 1.26% sodium bicarbonate.

The urine pH should be monitored. Correct metabolic acidosis with intravenous 8.4% sodium bicarbonate (first check serum potassium). Forced diuresis should not be used since it does not enhance salicylate excretion and may cause pulmonary edema. Hemodialysis is the treatment of choice for severe poisoning and should be considered in patients with plasma salicylate concentrations >700 mg/L (5.1 mmol/L), or lower concentrations associated with severe clinical or metabolic features. Patients under 10 years or over 70 have increased risk of salicylate toxicity and may require dialysis at an earlier stage.

**STORAGE CONDITIONS:** Store away from moisture and direct light, below 25° C.

**PACKAGING:** (2) blisters, each contains 10 film-coated tablets/carton box.

THIS IS A MEDICAMENT	
- A medicament is a product but unlike any other products.	
- A medicament is a product which affects your health, and its consumption contrary to instructions is dangerous for you.	
- Follow strictly the doctor's prescription, the method of use and the instructions of the pharmacist who sold the medicament. The doctor and the pharmacist are experts in medicine, its benefits and risks.	
- Do not by yourself interrupt the period of treatment prescribed for you.	
- Do not prepare the same prescription without consulting your doctor.	
<b>KEEP MEDICAMENTS OUT OF REACH OF CHILDREN</b>	
(Council of Arab Health Ministers)	(Arab Pharmacists Association)

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