1. **Introduction**
   1.1. Stomach is an organ located on the left upper abdomen behind ribs. It connects the esophagus and the small intestine. It works as a reservoir for food and a section where the food literally gets sterilized and partly digested.
   1.2. Gastrectomy is surgical removal of stomach. It can be classified as three types:
      1.2.1. Partial gastrectomy: removal part of the stomach, the intestine will be re-connected to the remaining stomach.
      1.2.2. Total gastrectomy: removal of the entire stomach, the intestine will be re-connected to the esophagus.
      1.2.3. Oesophago-gastrectomy: removal the upper part of stomach and part of the esophagus, lower part of your stomach is pulled upwards and attached to the end of your esophagus.
   1.3. Gastrectomy can be performed in two approaches:
      1.3.1. Laparoscopic gastrectomy is a minimally invasive surgery to remove the stomach. The abdominal cavity will be filled with carbon dioxide. A series of small incisions are involved. A laparoscope is used to view the abdominal cavity and remove the stomach through a small incision by dissection instruments.
      1.3.2. Open gastrectomy is performed when laparoscopic gastrectomy is not applicable. An incision is made in the abdomen.
   1.4. It is indicated for:
      1.4.1. Gastric Tumors
      1.4.2. Life-threatening obesity
      1.4.3. Severe gastric bleeding which do not respond to medications
      1.4.4. Persisting gastric inflammation
      1.4.5. Large gastric polyps
      1.4.6. Stomach ulcers

2. **Procedural Preparation**
   2.1. You will usually be admitted one day before the operation.
   2.2. Stop taking anti-coagulant that may increase the risk of bleeding according to doctors instruction, such as aspirin, warfarin and Plavix.
   2.3. Necessary clinical examinations and investigations may be carried out, such as blood tests, urine tests, electrocardiogram, or chest X-ray etc.
   2.4. The reason of operation, procedure and possible complications will be explained by the surgeon and consent form will be signed before operation.
   2.5. Pre-operative anaesthetic assessment will be performed. The anaesthetic management and its possible risks will be explained by the anesthetist with consent for anesthesia signed.
   2.6. No food or drink is allowed 6 to 8 hours before the operation.
   2.7. If laparoscopic gastrectomy will be performed, umbilical cleaning is required.
   2.8. Antibiotic prophylaxis and cross match will be performed.
   2.9. Prophylaxis against deep vein thrombosis may be indicated for patients at risk.

3. **Procedure**
   3.1. This operation is performed under General Anaesthesia.
   3.2. Incision is made based on the approach of the operation.
   3.3. The blood supply to the stomach is isolated and tied off.
3.4. Part or the whole stomach is removed based on the types of operation.
3.5. The wound is closed with staples or stitches.
3.6. Tubal drains are placed within the abdominal cavity to avoid extensive intra-abdominal collection.
3.7. A tube is placed, from the nose to stomach, for regular drainage of gastric fluid.
3.8. A tube maybe placed, from the nose to duodenum, to supply nutrition for a short period after the surgery.
3.9. A urine catheter is placed to monitor the urine output.

4. Recovery Phase
4.1. Your vital sign and fluid balance will be closely monitored.
4.2. Blood test will be performed to monitor the electrolytes level.
4.3. Mild throat discomfort, neck pain, hoarse or weak voice and increased mucus secretion might be experienced after tracheal intubation.
4.4. Tiredness, nausea and vomiting may be experienced after general anaesthesia. Inform the nursing team know if symptoms persisted or become severe.
4.5. Post-operative pain can be managed by Patient Control Analgesia (PCA) pump which is an electronically controlled infusion pump that delivers a prescribed amount of intravenous analgesic when the button is pressed. Inform nurses for alternative pain control if pain persisted.
4.6. Intravenous drip will be continued for nutritional support until feeding resumes.
4.7. An X-ray may be performed to confirm no leakage before diet resume.
4.8. Diet will be resumed gradually around 3-5 days after the surgery. Start with clear water, fluid, soft and diet as tolerated according to Doctor’s prescription.
4.9. Inform nurses if you experience excessive pressure over the wound, this may indicate hematoma formation.
4.10. Early mobilization as tolerable is suggested to minimize the risk of pneumonia and blood clot in the legs.
4.11. Deep breathing exercise is encouraged to prevent post-operative pneumonia.
4.12. Place hands over the abdominal wound when coughing or bringing up sputum.
4.13. The wound dressing will be kept intact after operation.
4.14. Avoid pulling the tubing or drain when mobilize.
4.15. Stitches or staples will be removed around 10-14 days.

5. Possible Risks and Complications
5.1. Complications for general major operation include:
   5.1.1. Myocardial Infarction
   5.1.2. Myocardial Ischemia
   5.1.3. Stroke
   5.1.4. Deep Venous Thrombosis
   5.1.5. Pulmonary Embolism
   5.1.6. Intestinal obstruction or paralytic ileus
5.2. Potential complication related to laparoscopic surgery include:
   5.2.1. Vascular or visceral injury by trocar insertion (<1%)
   5.2.2. Fatal gas embolism and hypercarbia (<1%)
   5.2.3. surgical emphysema and pneumothorax.
5.2.4. Possible injury to vascular and visceral organs including liver, spleen, rectum, urinary bladder, bowel or blood vessels.
5.2.5. Possibility of tumor metastasis at port site.
5.2.6. Further intervention including conversion to open surgery for poor progress or for management of complications.

5.3. Potential complications related gastrectomy include:

5.3.1. Bleeding
5.3.2. Infection
5.3.3. Injury to adjacent organs
5.3.4. Fistulation
5.3.5. Leakage from the wound junction causing infection or abscess
5.3.6. The connection to the intestine narrows, causing intestine obstruction
5.3.7. Dumping syndrome
5.3.8. Morning vomiting
5.3.9. Mal-nutrition
5.3.10. Anemia
5.3.11. Mortality (<1%)

6. **Discharge Education**

6.1. Seek medical attention if severe pain, tenderness, purulent discharge, severe vomiting, fever (body temperature above 37.8°C) or rigor occurs.
6.2. You may take analgesics as prescribed by your doctor if necessary.
6.3. Avoid strenuous activities and heavy lifting for 6 weeks after the operation.
6.4. Follow up appointment should be attended as arranged.
6.5. Keep your wound dressing clean and dry to minimize risk for infection.
6.6. Diet advise:
   6.6.1. eat slowly
   6.6.2. small and frequent meals
   6.6.3. Avoid eating high-fiber foods immediately after the surgery.
   6.6.4. Eat food with high protein and low in carbohydrates
   6.6.5. Avoid simple sugars
   6.6.6. Avoid drinking water along with or immediately after eating
   6.6.7. If upper part of stomach is removed, sit up for at least one hour after meals to prevent reflux
   6.6.8. Take supplements as indicated

7. **Remark**

7.1. The above mentioned procedural information is not exhaustive, other unforeseen complications may occur in special patient groups or different individual. Please contact your physician for further enquiry.

8. **Reference**


I, ______________________ acknowledged that the above information concerning the operation or procedure has been explained by Dr ____________________. I have also been given the opportunity to ask questions and received adequate explanations concerning the condition and treatment plan.

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