

BARIATRIC SURGERY COMPLICATIONS CLINICAL PATHWAY
BSCP #9

<p align="center"><u>CALL MD FOR ANY OF THE FOLLOWING</u></p>	<ul style="list-style-type: none"> • For sustained HR greater than 120 and less than 50 • For temperature greater than 100.5 F • For Systolic BP less than 90 or greater than 180 • For Diastolic BP less than 50 or greater than 100 • For RR less than 12 or greater than 30 • If no urine output within 4 hours post-op or for subsequent urine output less than 120mL over 4 hours • For blood glucose level greater than 360 mg/dL if finger stick blood glucose check ordered by MD 	<p align="center"><u>CALL MD FOR ANY OF THE FOLLOWING</u></p>
<p align="center">COMPLICATION</p>	<p align="center">SIGNS AND SYMPTOMS</p>	<p align="center">ACTION</p>
<p><u>LEAK</u></p> <ul style="list-style-type: none"> • CONSIDER THE ENTIRE PICTURE. CAN BE DIFFICULT TO DETECT OR DIAGNOSE • LISTEN TO YOUR PATIENTS • MAY OCCUR AFTER ANY BARIATRIC PROCEDURE AT STAPLE LINES AND ANASTOMOSIS <p>CAN MIMIC: PE, PNEUMONIA, SEVERE ATELECTESIS, OBSTRUCTION, BLEEDING, GASTROPARESIS (DILATED EXCLUDED STOMACH), INFECTION FROM OTHER SOURCES, PLEURAL EFFUSION, PANCREATITIS, DKA</p>	<ul style="list-style-type: none"> • SIGNS AND SYMPTOMS MAY BE EXTREMELY SUBTLE • Most and sometimes only reliable indication is SUSTAINED TACHYCARDIA > 120 • Sudden onset of new left shoulder pain or discomfort • SOB • Decrease in Oxygen Saturation • Drop in blood pressure • Decrease or lack of urine output • Fever, chills • Hiccups • Diaphoresis • Sense of Impending Doom • Abdominal pain and tenderness are late signs and might not be present AT ALL <p>DIAGNOSIS: UGI, Possible CT of Abd/Pelvis</p>	<p>If a leak is suspected:</p> <ul style="list-style-type: none"> • NPO • Place O2, monitor patient carefully • IVF • CBC with diff, BMP • Foley catheter to monitor patient closely • Consider telemetry or ICU status • UGI Gastrograffin Swallow (Send patient in wheelchair) • If negative and still suspicious, can follow with CT of Abd/Pelvis <p>May be difficult to rule out despite all attempts. Sometimes the decision is made to re-explore the patient</p> <p><u>If a leak is confirmed:</u> Re-operation may be indicated</p>
<p><u>PULMONARY EMBOLISM</u></p> <ul style="list-style-type: none"> • CAN BE DIFFICULT TO DISTINGUISH FROM A LEAK 	<ul style="list-style-type: none"> • SOB • Tachycardia • Pleuritic pain • Drop in Saturation • Shoulder pain • Hemodynamic instability (large embolus) • Difficult to distinguish from a leak <p>DIAGNOSIS</p> <ul style="list-style-type: none"> • Increase in A-a gradient by ABG • DVT by Duplex • Spiral CT of chest (needs 20G-Abtecub) 	<ul style="list-style-type: none"> • Thrombolytic • Anticoagulation • If saddle embolus, catheter directed thrombolytic • Embolectomy

<u>DVT</u>	<ul style="list-style-type: none"> V/Q (Note: High degree of indeterminate studies due to obesity) Can be asymptomatic Pain at site of occlusion Edema Redness Warmth Possible neuralgia if edema causes compression of local nerves DIAGNOSIS: Duplex, Venogram 	<ul style="list-style-type: none"> Anticoagulation Possible filter placement No pneumatic compression devices
<u>ATELECTESIS</u>	<ul style="list-style-type: none"> Fever Diminished Breath Sounds DIAGNOSIS: Exam, Chest X-ray 	<ul style="list-style-type: none"> Deep Breathing, Coughing, IS Pulmonary Toilet Ambulation IPPB
<u>PNEUMONIA</u>	<ul style="list-style-type: none"> Fever, Chills SOB Cough DIAGNOSIS: Exam, Chest X-ray 	<ul style="list-style-type: none"> Antibiotics Treatment for Atelectesis
<u>PLEURAL EFFUSION</u>	<ul style="list-style-type: none"> Chest or rib pain Fever, Chills SOB DIAGNOSIS: Chest X-ray 	<ul style="list-style-type: none"> Thoracentesis Cough, Deep Breathing, IS Ambulation R/O Subphrenic Abscess with CT of the Abdomen
<u>BLEEDING</u>	<p>Intraluminal</p> <ul style="list-style-type: none"> Patient may vomit blood or pass per rectum Patient may have hiccups or shoulder pain from bleeding in the excluded stomach which is causing distension <p>Intraperitoneal</p> <ul style="list-style-type: none"> Could be seen in the drain if one is present May occur without collecting in a drain Distension without tympany could be a late finding Hemodynamic instability Drop in H/H, coagulopathy or increase in base deficit 	<ul style="list-style-type: none"> NPO, IVF, Type and Cross Large bore IV access Transfusion May need telemetry or ICU Most bleeding is self limited without re-operating but some may require return to OR
<u>BOWEL OBSTRUCTION</u>	<ul style="list-style-type: none"> Tender, Distended abdomen Colicky pain May mimic leak Increased Ascites in drain from 3rd Spacing 	<ul style="list-style-type: none"> NGT decompression Gastrostomy placement Exploration
<u>STRICTURE</u>	<ul style="list-style-type: none"> Nausea, Vomiting Spitting Saliva Fluid reflux Intolerance to food, dysphagia 	<ul style="list-style-type: none"> Anastomotic dilation by Endoscopy May require hospitalization if dehydration present
<u>INCISIONAL HERNIA</u>	<ul style="list-style-type: none"> Protrusion at incision Abdominal pain Nausea Constipation 	<ul style="list-style-type: none"> Teach patients signs of incarceration Repair
<u>SEROMA</u>	<ul style="list-style-type: none"> Drainage with no odor 	<ul style="list-style-type: none"> Incise and Drain

<u>SUBCUTANEOUS ABCESS</u>	<ul style="list-style-type: none"> • Serosanguinous • Hot, Hardened Area • Cellulitis • Drainage 	<ul style="list-style-type: none"> • Wet to dry Dressing • I&D, Wet to Dry dressings • Antibiotics for cellulites
<u>ULCER</u>	<ul style="list-style-type: none"> • Epigastric, Substernal, LUQ Abdominal pain • Dysphagia • Nausea, Vomiting • Reflux • Difficult to distinguish from Stricture <p>DIAGNOSIS: Endoscopy</p>	<ul style="list-style-type: none"> • Medication: PPI, Prevpack, Carafate • Stop smoking, NSAIDS, ASA • Revision if medical attempts fail
<u>ADJUSTABLE GASTRIC BAND EROSION</u>	<ul style="list-style-type: none"> • Sudden loss of restriction • Occult wound infection in port site • Nausea, vomiting • Fever • Abdominal Pain • Reflux 	<ul style="list-style-type: none"> • Removal of Band
<u>ADJUSTABLE GASTRIC BAND SLIP/EROSION</u>	<ul style="list-style-type: none"> • Nausea • Vomiting especially progressive • Reflux • Nighttime coughing or choking <p>DIAGNOSIS: Upper GI</p>	<ul style="list-style-type: none"> • May attempt to empty band for reduction but likely revision operation

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References: ASBS Public/Professional Education Committee - May 23, 2007

Revised February 7, 2008

American College of Surgery