***Model summery***

* + A 50 year old farmer presented with features of obstructive jaundice for 3 month duration which was gradual onset and progressively worsening.it is painless jaundice and associated with recent onset exocrine and endocrine failure of pancreas. Patient denies a history of melena, hematemesis, early satiety, dysphagia suggestive of upper GI malignancy give rise to portahepatic lymph node enlargement.At the same time patient denies long history of significant alcohol intake or past history of hepatitis to suggest HCC.
	+ The condition was not complicated with ascending cholangitis or hepato-renal syndrome even though there are some feature of bile acid malabsoption.
	+ There are no feature of distant spread of the disease clinically since the primary pathology is more suggestive of pancreatic head carcinoma.
	+ On clinical examination patient is deeply icteric, not pale and widespread scratch marks with shiny nails.No Left supraclavicular region lymphnode enlargements.Abdominal examination doesnot show any organomegaly or feature of portal hypertention or cirrhosis.
	+ Patient has underwent UGIE and external biliary drainage procedure as well as CECT thorax abdomen and pelvis.
	+ Patient gas a good insight regarding the disease and course of tratments.

 **An overview for Investigation and management**

Problems of obstructive jaundice patients.

1. Risk of sepsis
2. Liver failure
3. Coagulopathy
4. Malnutrition.

Initial assessment to assess above problems.

Blood workup

* FBC – to see evidence of infection, Hb level and Platelet count.
* CRP- to see evidence of recent infection (cholangitis)
* Liver enzymes
	+ ALP -high in biliary tract obstructions.
	+ GGT – high in biliary tract obstructions
	+ T/BIL, D/BIL, I/BIL- to assess bilirubin levels
	+ Albumin – a good indicator of liver failure (t ½ is 19 days) and malnutrition.
* Renal functions – to see evidence of hepato- renal syndrome
* PT/INR – to assess coagulation status (VIT K dependent clotting factor activation delay can affect extrinsic pathway.

Imagine studies.

* Uss abdomen – to see for possible etiology, extra hepatic and intra hepatic biliary duct dilatation, liver status cirrhotic or not, Free fluid In the abdomen, splenomegaly, evidence of portal vein thrombosis.
* CECT abdomen pelvis- to identify possible etiology (pancreatic head mass, cholangio ca etc..
* MRCP- if you have high suspicion of bile duct pathology sensitivity is higher than CT and you don’t need contrast for this study
* ERCP –invasive procedure with relative chance o post procedure pancreatitis (6 %-10%) but can visualize biliary tree and availability is more than MRCP in our setting.

Tumor markers

* Ca 19.9 – levels will be falsely high in obstructive jaundice but if bilirubin levels are normal sensitivity is high in detecting cholangio ca or pancreatic ca
* CEA- same as above

Management

* Correct coagulopathy – urgency of correction depends on patient’s requirements. If ERCP is very close by need to correct INR with FFP otherwise can give VIT K iv supplements and correct it.
* IV antibiotics – here to treat possible cholangitis and as a preventive measure after ERCP to prevent development of cholangitis
* Hydration – adequate iv fluids in these situations are paramount because patients are severely dehydrated due to loss of appetite to prevent hepato renal syndrome and to maintain good intravascular volume status.
* Correction of biliary stasis - External biliary drainage or ERCP and stenting ( ERCP is always physiological because it drains bile in to the duodenum and eventually correct other physiological abnormalities as well as biliary decompression. But ERCP can fail to cannulate CBD in situations like pancreatic head ca. This type of situations EBD will be help full.
* ICU care might be important patients requiring organ support due to biliary sepsis.

Definitive management.

* Curative procedures –whipple’s procedure
* Palliative procedures- Biliary bypass procedures.

Whipple’s procedure



Biliary bypass procedure

