

45. This patient received ceftriaxone which can reach high concentrations in bile (100 to 200 times its serum concentration). This can lead to crystal formation with calcium concretions bound to ceftriaxone itself. This is a special kind of stone unique to ceftriaxone.

There are a bunch of risk factors for gallstones you should know about. We've covered most of them in the vignettes, but here is a table to remind you of the predisposing conditions and clues to look for:

Table 45-1.

<i>RISK FACTORS FOR GALLSTONES</i>		
<i>Risk Factor</i>	<i>Clues in Question Stem</i>	<i>Type of Stone</i>
High Estrogen	<ul style="list-style-type: none"> • Pregnant • Estrogen replacement therapy • Female patient (risk unto itself) 	Cholesterol
Biliary dyskinesia	<ul style="list-style-type: none"> • Fasting • On TPN • Crash diet • Somatostatinoma (diarrhea, diabetes, pancreatic mass, neurofibromatosis) 	Cholesterol
Obesity	<ul style="list-style-type: none"> • Self-evident... 	Cholesterol
Hemolysis	<ul style="list-style-type: none"> • Cirrhosis • Sickle cell anemia • Hereditary spherocytosis 	Bilirubin or black pigment stones
Recurrent pyogenic cholangitis	<ul style="list-style-type: none"> • From Asia • No gallstones • Innumerable stones in CBD and hepatic ducts—left hepatic duct in particular 	Mixed or brown pigment stones

Oh, right, those UDCA questions. Here are the answers to that little pop quiz:

- Weight loss → Yes; cholesterol stones from dyskinesia may respond to UDCA.
- PBC → Yes; UDCA can help reduce disease progression.
- PSC → No; UDCA does not reduce disease progression.
- Recurrent pyogenic cholangitis → No; mixed stones not dissolvable by UDCA.
- Cholestasis of cystic fibrosis → Yes.