**Polycystic Kidney Disease**

**Characteristic Findings:**
- Polyuria
- Polydipsia
- Pain (dull, in the renal angle)
- Hematuria (in ~30%)
- Hypertension
- Abdominal discomfort
- Stroke or subarachnoid haemorrhage may be the first sign!

**On physical exam:** Bilateral loin masses will be tender and palpable! This is the only other time you can ballot a kidney except for massive hydronephrosis.

**Differentials to rule out:**
- Bilateral calculi – but… they would be in more pain, it would be colicky, there would be frank red hematuria, etc…
- Hydronephrosis – any historical evidence of obstruction? Oliguria?
- Pyelonephritis- are they febrile? History of recurrent UTI? Any leucocytes in the urine?

**INVESTIGATIONS:**

<table>
<thead>
<tr>
<th>LOOKING FOR:</th>
<th>FBC</th>
<th>EUC</th>
<th>Urinalysis</th>
<th>Urine Microscopy</th>
<th>Abdo Ultrasound</th>
<th>CT scan</th>
<th>HEAD MRI SCAN</th>
<th>Genetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 cysts in 1 kidney or 1 cyst in each - in an at-risk patient younger than 30 years OR At least 2 cysts in each kidney in an at-risk patient aged 30-59 years OR At least 4 cysts in each kidney for an at-risk patient aged over 60</td>
<td>Elevated hematocrit may result from INCREASED EPO PRODUCTION from the cysts</td>
<td>There may be nromocytic normochromic anaemia if they are in end stage renal failure</td>
<td>Electrolyte abnormalities are not usually seen- if they are, its either a late presentation or another problem underlying the presentation, like PKD as well as urinary obstruction</td>
<td>Of course there will be BLOOD; but will there be LEUCOCYTES?</td>
<td>THIS IS “THE SHIT”: will show you the characteristic kidney cysts, cysts in spleen and liver, etc… THE IMAGING OF CHOICE</td>
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<td>DNA linkage analysis for family members</td>
<td></td>
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</tbody>
</table>

**MANAGEMENT**

Relieve pain – NSAIDs, opiates
Control hypertension – these people get berry aneurysms:
  - Plus blood pressure control improves renal outcome
  - ACE INHIBITORS are the drug of choice;
  - Beta Blockers can be added for bonus effect
  - ALSO: loose weight, stop smoking, start exercising, etc...

Monitor renal function: eventually, will need dialysis and transplant
Genetic Counselling: risk to existing and future offspring
And AVOID CONTACT SPORTS, lest you burst a cyst!