ADULT ~~AVN~~ OSTEONECROSIS

(A) Alcohol
Steroids 10-30%
Idiopathic (10-20%)
Trauma
Gaucher's
Rheumatoid / radiation
Infection
Pancreatitis
Sickle cell / SLE / smoking
CRF / Chemo / Caisson's

(B) Altered blood flow
Arterial Extra osseous
Trauma
Vasospasm (decompression sickness)
Art Intra
Sickle cell → Micro emboli
Fat emboli
Venous
Fat cell hypertrophy (steroids)
↳↑ intraosseous pressure

(C) Fidcat
0 Preclinical — No Sy No imaging abnormality
Suspected y on other hip (MRI normal)
Can be diagnosed on histology
I Pre radiographic — Radiographs (N) MRI +ve
II Pre collapse
A — Osteopenia demineralisation
B — Crescent sign = linear subcortical lucency
III Collapse — Flattening
IV OA — 2° degen changes

Steinberg similar

0	Same	
I	Normal xray, abnormal MRI	Mild < 15%
II	Cystic & sclerotic	Mod > 15 < 30%
III	Subchondral collapse	Severe > 30%
IV	Fem head flattening	Fem Had involved
V	Joint space narrowing	
VI	Advanced dysp	

Kerboull necrotic angle > 200° bad

Conservative

Tx Statins, anticoagulants & bisphosphonates
Hyperbaric O_2

Surgery

Fidcat I 84%
2 65%
3 47%

If Preserving

Core decompression
+/- tantalum rod
(difficult retrieval)

Vascularised bone graft (fibula)
Pre collapse
< 45 yrs
No contact hx
Arthrological factor removed
McKee Toronto

Trapdoor procedure
Dislocate head & bone graft placed under flap of cartilage
Mont 73% good results Fidcat 3 & 4 @ 5yrs

Osteotomy
< 45 yrs, unilat disease, small < 200° KNA
Valgus for small ant lat

If replacing

THA
< 55 yrs Cemented COP 10yr 4%
Arthrodesis