

Peripheral Endovascular Therapy

Subintimal balloon angioplasty and stenting

Dr. Prasad Jetty
Vascular and Endovascular Surgeon
The Ottawa Hospital

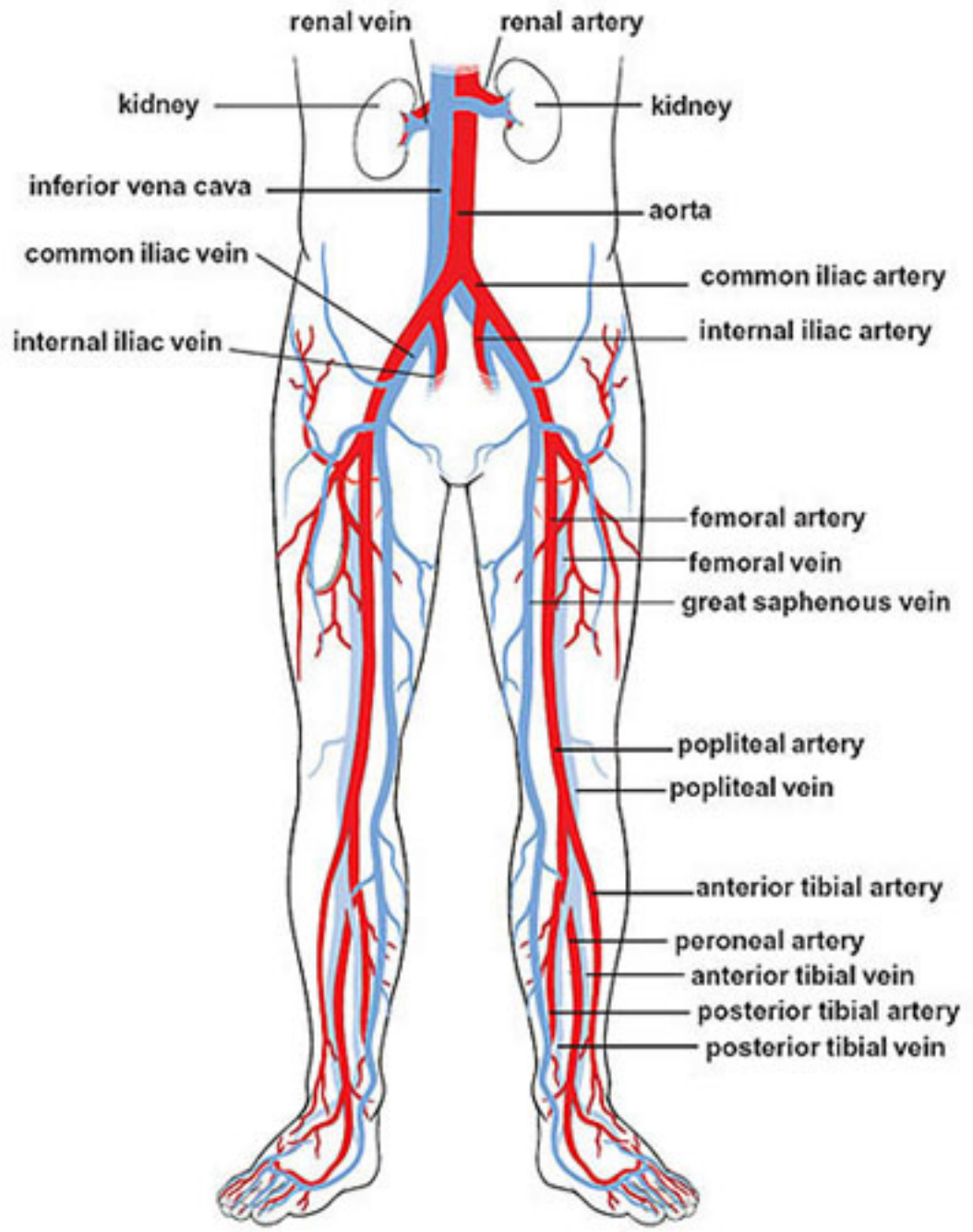
Université d'Ottawa | University of Ottawa



SLUM DOG Millionaire

Vascular Edition

ANATOMY



Peripheral Vascular Disease

- blockages in arteries to lower extremities due to atherosclerosis
- Risk factors
 - smoking
 - DM
 - HTN
 - hyperlipidemia
 - family history
 - obesity
 - sedentary
 - male gender



Manifestations of PVD

CLAUDICATION

Intermittent Claudication

- Inadequate supply of oxygenated blood with exertion
- Pain/ache/fatigue in the calf, thigh, or buttock muscles from exertion
- Patient usually has to stop walking for a few minutes
- From latin term “claudicatio” meaning to limp- first described in horses
- Conservative management



CRITICAL LIMB ISCHEMIA

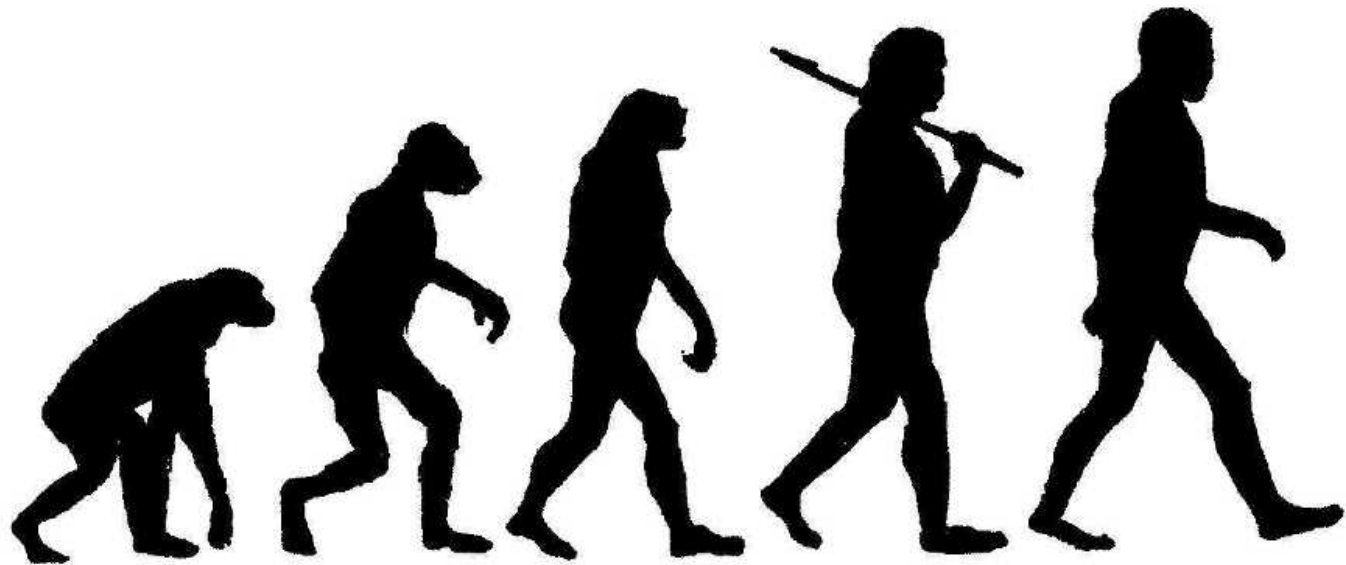
Critical Limb Ischemia

- Inadequate tissue perfusion of oxygenated blood at rest
- Night pain
- Rest pain
- Rubor
- Tissue loss
 - Ulcers
 - Gangrene



Treatment

Evolution of Vascular Surgery











#14 20-Nov-2008 12:03PM UN
Ac: 2751
Group: (S 1)
Series: 1



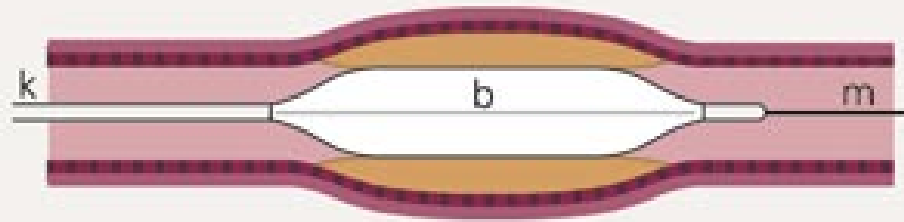
#14 20-Nov-2008 12:10PM UN
Ac: 2751
Group: (S 1)
Series: 1



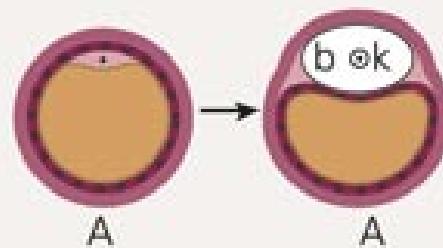
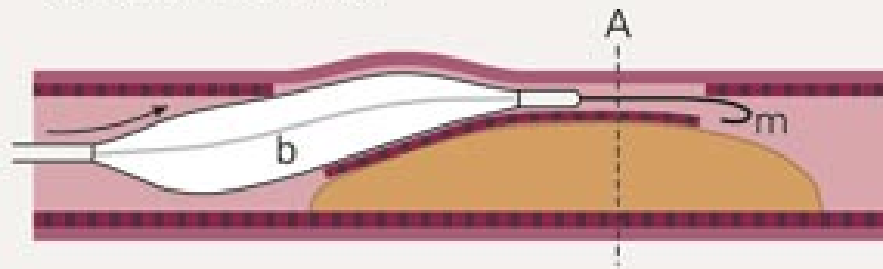
#14 20-Nov-2008 12:03PM UN
Ac: 2751
Group: (S 1)
Series: 1



Konvensjonell PTA



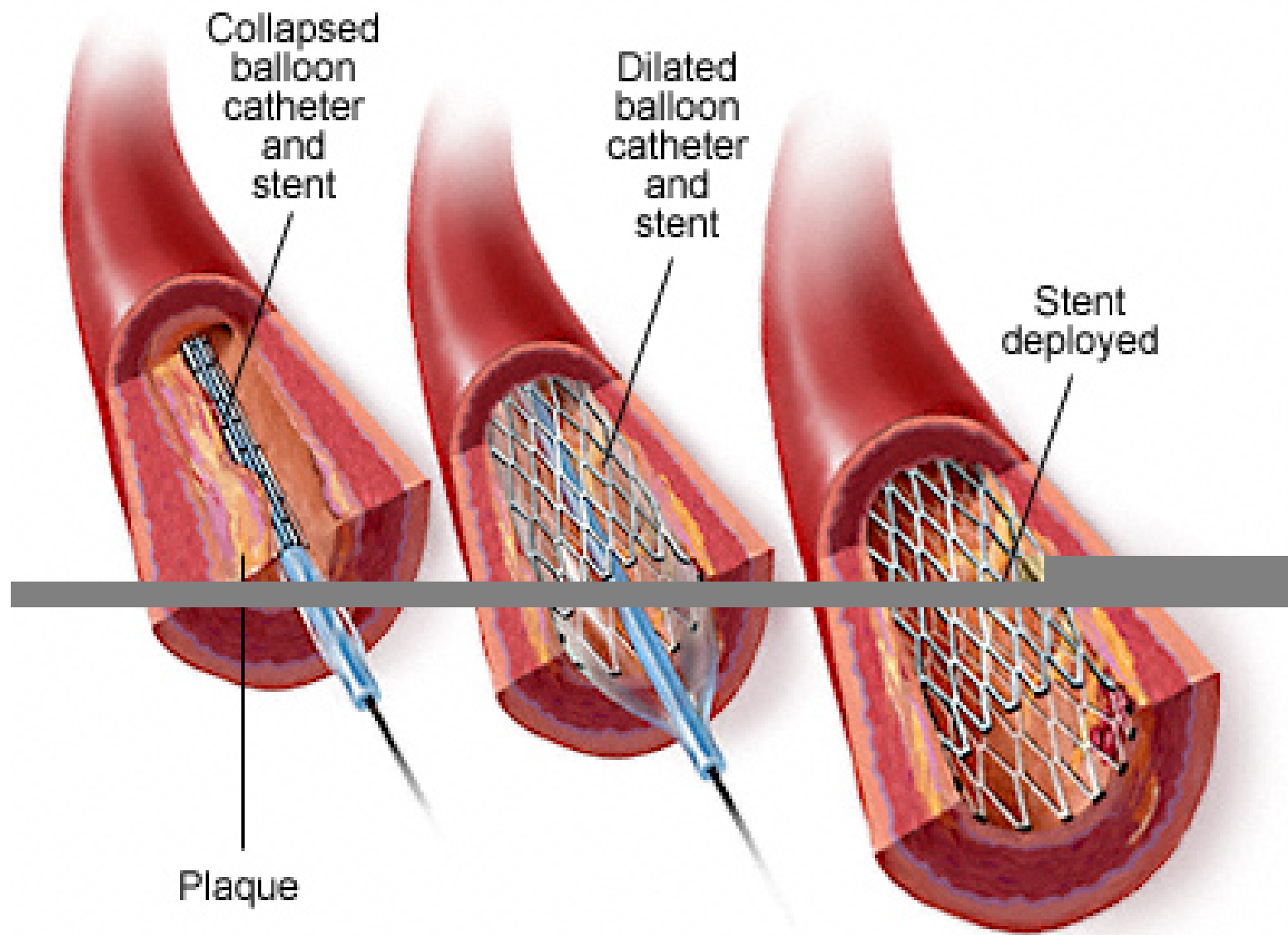
Subintimal PTA



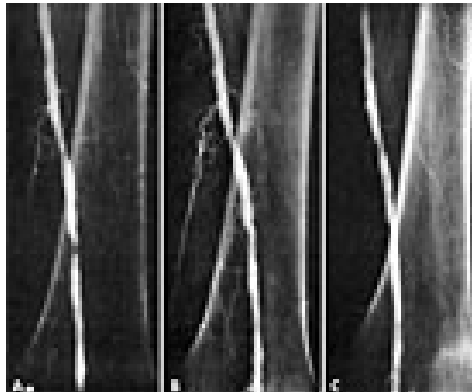
— Adventitia/media

— Intima

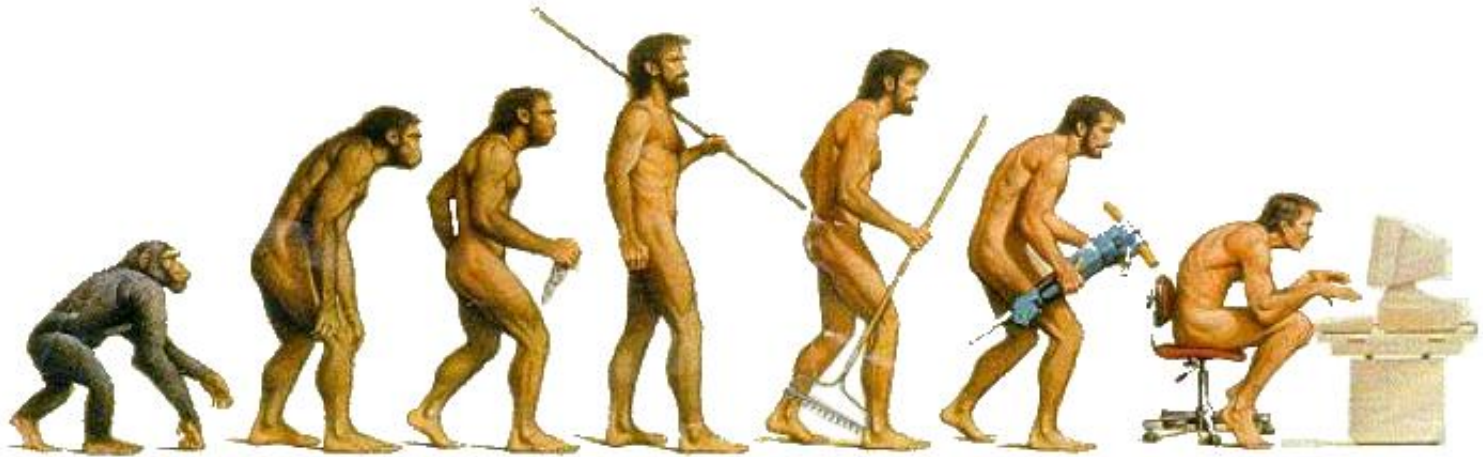
● Plakk/trombe



1963



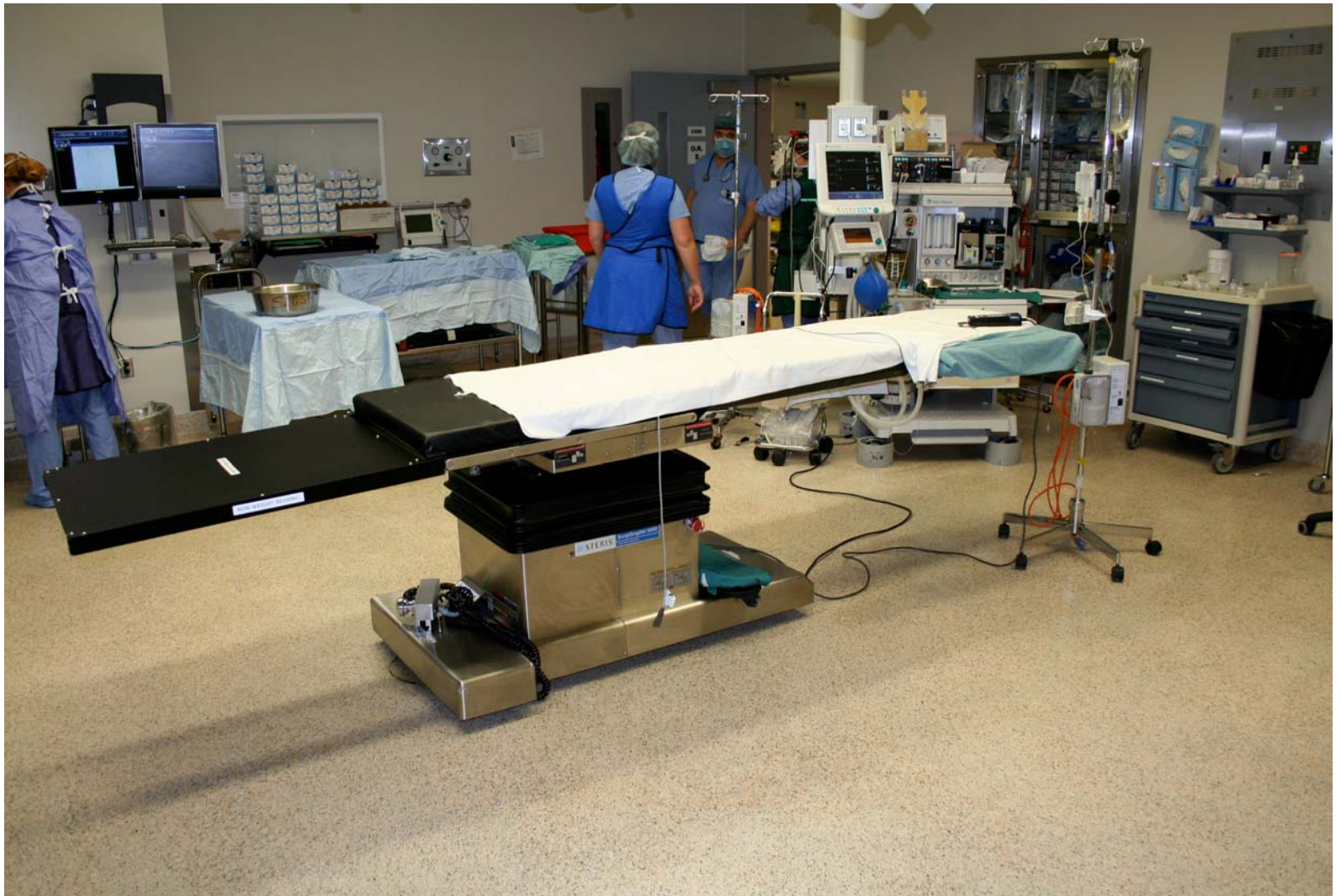
Evolution



(OR is it?)

















#34: 20-Nov-2008 12:13PM UN

Ac: 2751

Lossy (4:1)

Series 1



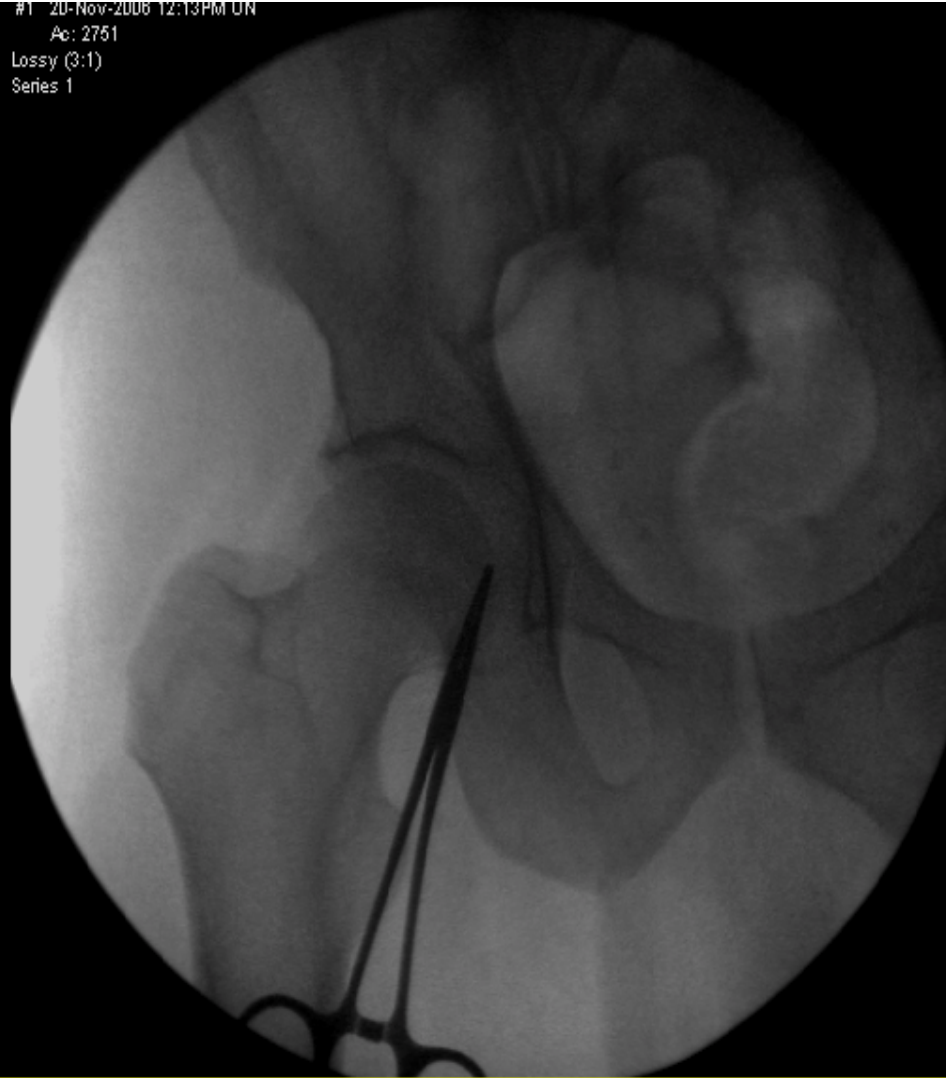


#1 20-Nov-2008 12:13PM ON

Ac: 2751

Lossy (3:1)

Series 1









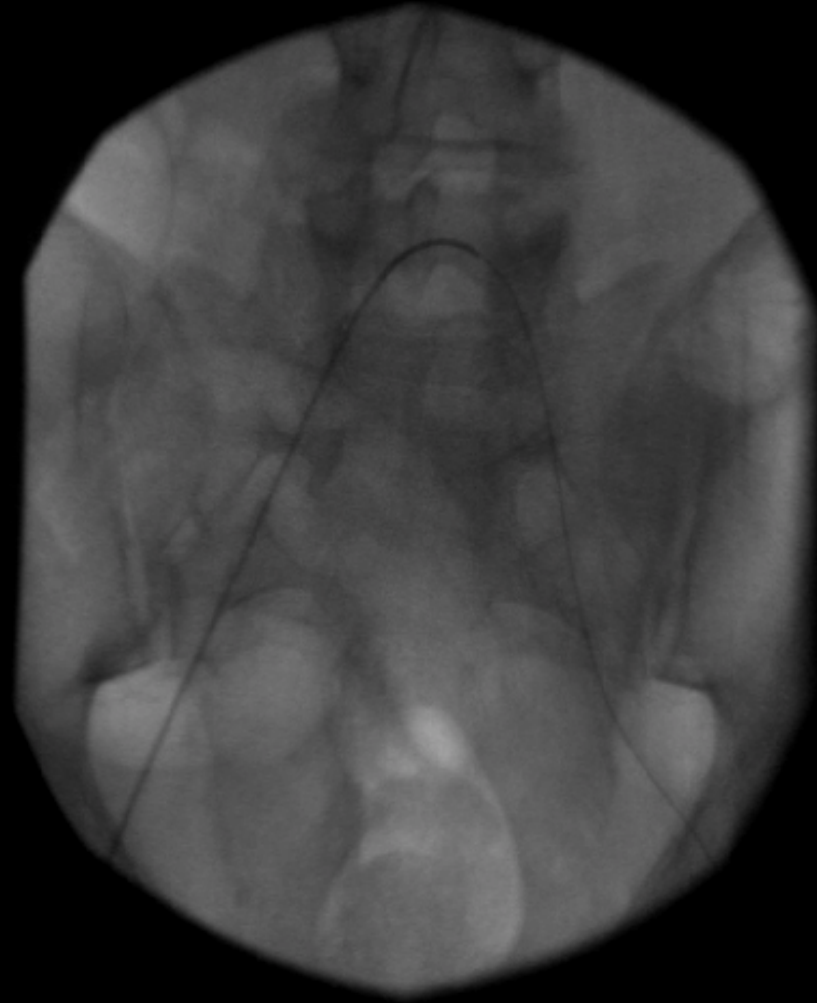


#3 20-Nov-2006 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



#8 20-Nov-2006 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



#10 20-Nov-2008 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



#11 20-Nov-2008 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



Ac: 2751

Lossy (3:1)

Series 1



#14 20-Nov-2006 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



#15 20-Nov-2008 12:13PM UN

Ac: 2751

Lossy (3:1)

Series 1



#39 20-Nov-2008 12:13PM UN

Ac: 2751

Lossy (4:1)

Series 1

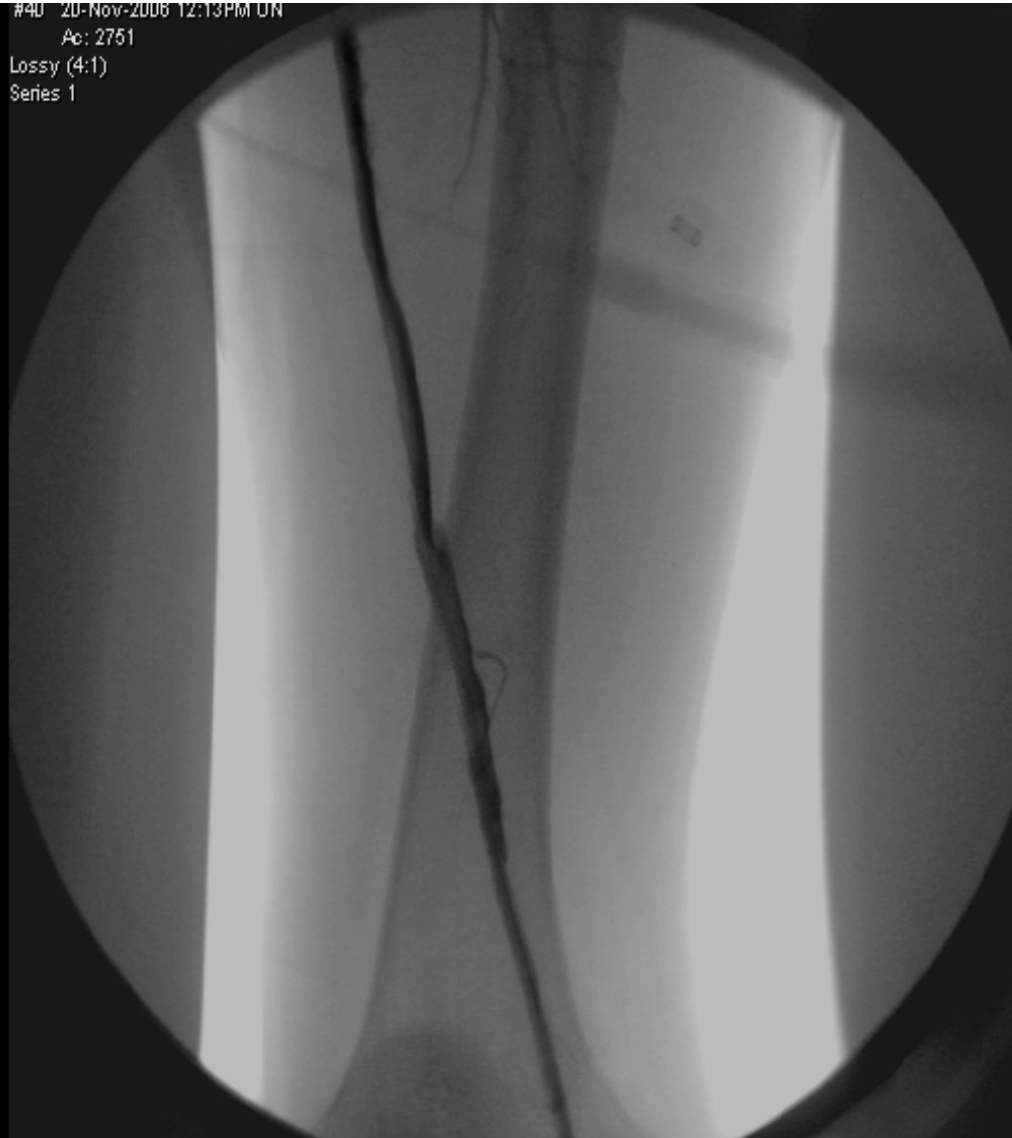


#40 20-Nov-2006 12:13PM UN

Ac: 2751

Lossy (4:1)

Series 1



2008
1997
1996
1995
1994
1993
1992
1991
1990
1989
1988
1987
1986
1985
1984
1983
1982
1981
1980
1979
1978
1977
1976
1975
1974
1973
1972
1971
1970
1969
1968
1967
1966
1965
1964
1963
1962
1961
1960
1959
1958
1957
1956
1955
1954
1953
1952
1951
1950
1949
1948
1947
1946
1945
1944
1943
1942
1941
1940
1939
1938
1937
1936
1935
1934
1933
1932
1931
1930
1929
1928
1927
1926
1925
1924
1923
1922
1921
1920
1919
1918
1917
1916
1915
1914
1913
1912
1911
1910
1909
1908
1907
1906
1905
1904
1903
1902
1901
1900

2

bering No cut

mm



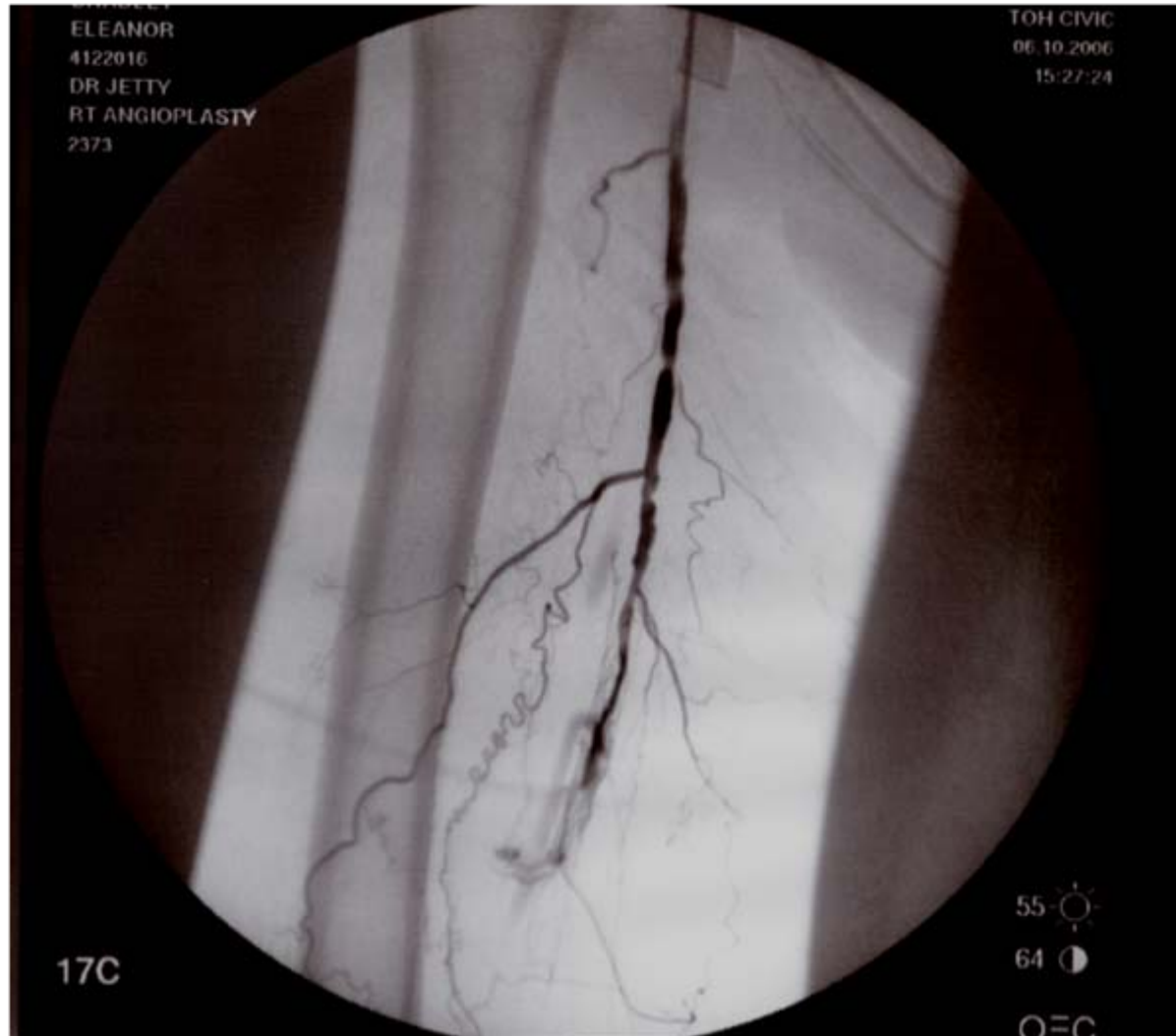
1:1.5 gap
HE + 39.4mm/rot

Lossy 0/1

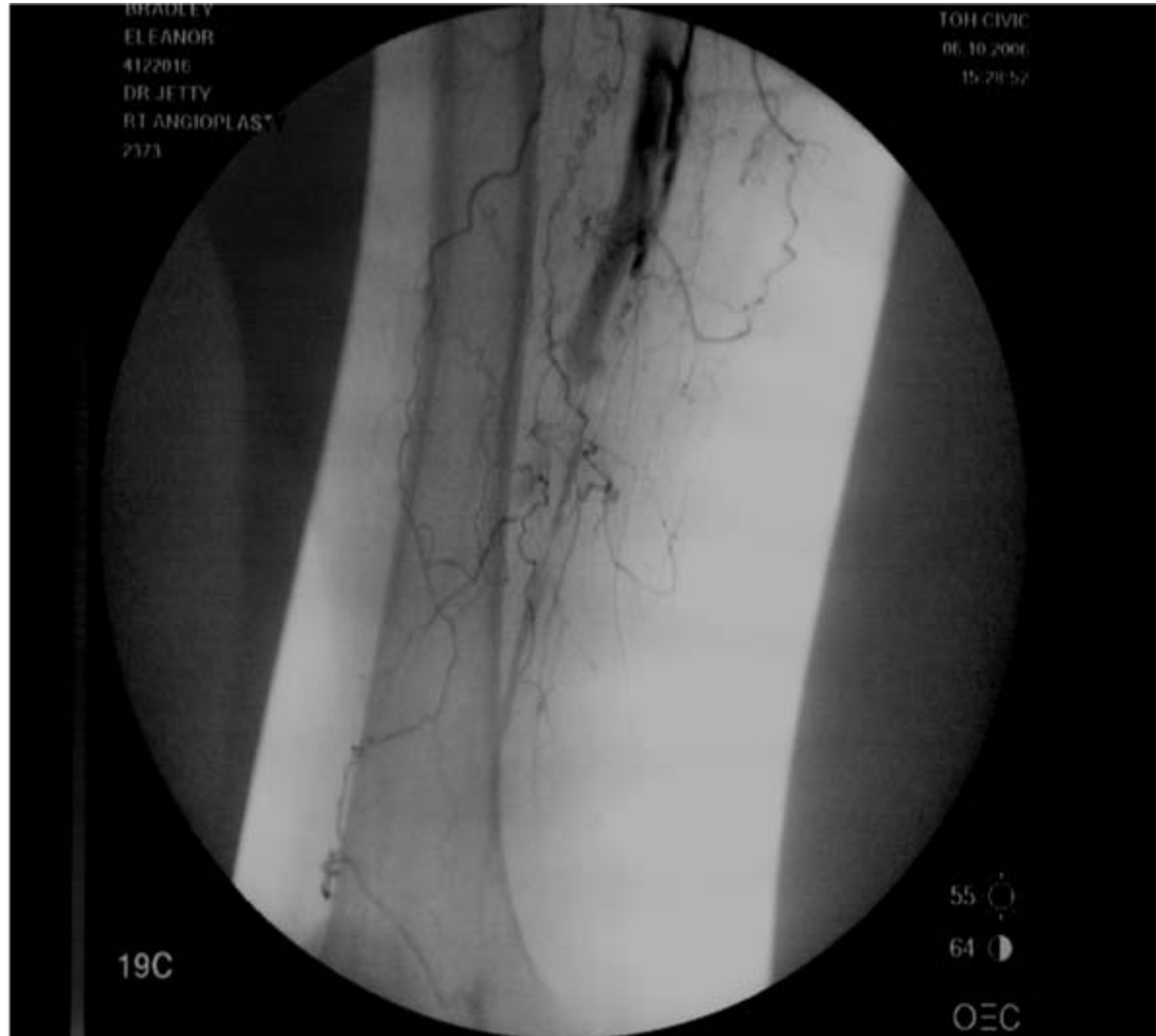
3ae



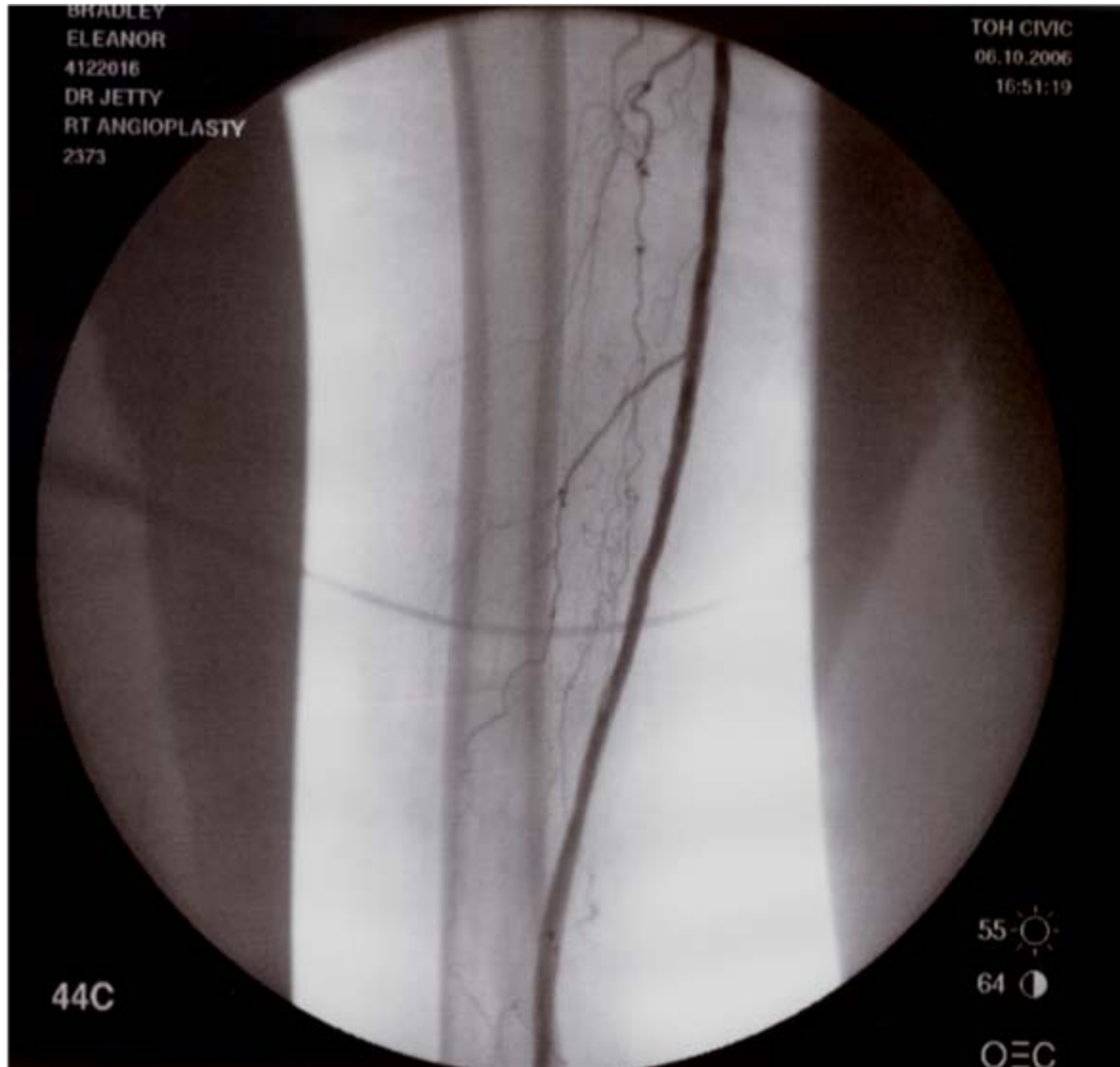
Subintimal Angioplasty Failures



Subintimal Angioplasty Failures



Subintimal Angioplasty Failures



Subintimal Angioplasty Failures



Durability and morbidity

- Endovascular therapy
 - Less durable (70% at 1-2 years)
 - Can be repeated
 - Minimally invasive
 - Outpatient procedure
 - Surgical bypass is always an option
- Open surgical bypass
 - More durable (70% at 4-5 years)
 - More difficult to repeat
 - Invasive and morbid
 - Inpatient procedure



Endovascular suites





SHELF #1

BALLOONS

BALLOONS

BALLOONS

X 13CM

GOLD

BALLOONS

BALLOONS

BALLOONS

BALLOONS

BALLOONS

BALLOONS

BALLOONS





***The Ottawa Hospital
Endosuite
(circa 2006)***





