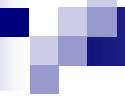


POSTMORTEM CHANGES AND TIME SINCE DEATH- 3

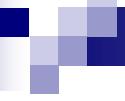
LATE POST MORTEM PERIOD



OBJECTIVES

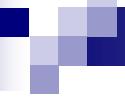
At the end of this lecture student should be able to,

- Identify the changes occurring in late postmortem period
- Identify the factors influencing late post mortem changes



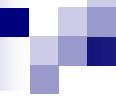
OBJECTIVES

- State the medico legal significance of various post mortem changes
- Differentiate Adipocere from Mummification



DECOMPOSITION

- Autolysis – Due to enzyme activity (non bacterial)
- Putrefaction- Due to bacterial action (Anaerobic and Coliforms)



Factors affecting putrefaction

- Environmental temperature
- Moisture
- Air
- Clothing Age and Build
- Cause of death
- Bodies in water

TIME OF ONSET

- 18 hours - greenish discolouration of the right iliac fosse. (due to bacterial action of the caecum which lies superficially)
- 1-2 days - Bluish purple lines seen over thighs, abdomen and chest. (Due to haemolysis of the blood in veins which causes staining)
- Abdomen get distended

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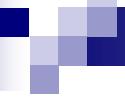




TIME OF ONSET

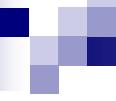
- 1-2 days - skin blisters which enlarges and rupture with a foul smelling blood stained liquid, hair easily detaches
- 2-3 days – whole body swells due to production of gases. (SO_2 , NH_3)





TIME OF ONSET

- 3-4 days - effects of increase intra abdominal pressure.
 - Expulsion of urine and faeces
 - Uterine, rectal prolapse
 - Bloody froth from nose and mouth



TIME OF ONSET

- 3- 4 days - Bloody fluid from rectum and vagina
 - Skin colour changes to green / black
 - Maggots infestations

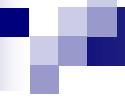
Skin colour change green/black



PINK TEETH



Haemoglobin products staining
the dentine



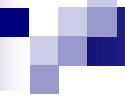
TIME OF ONSET

- 4-5 days - casts of palms and soles shed
nails and teeth falls off
- 5-10 days - liquefaction begins
- 1-3 months - skeletalization with traces
of soft tissues and tendons



Liquefaction of tissues





TIME OF ONSET

- 3-6 months- bones are moist and smelly
- >1 year- dry bones

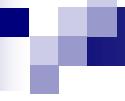
SKELETELISATION

Due to the putrefaction or animal attacks a dead body is converted to a skeleton

- 2 - 3 wks - complete skeletonisation
 skeleton will be heavy, moist, oily,
 odour + with fleshy tags
- 3 months - bones disarticulated,
 lighter
- 12 months - bones light & dry



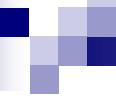




MAGGOT INFESTATION

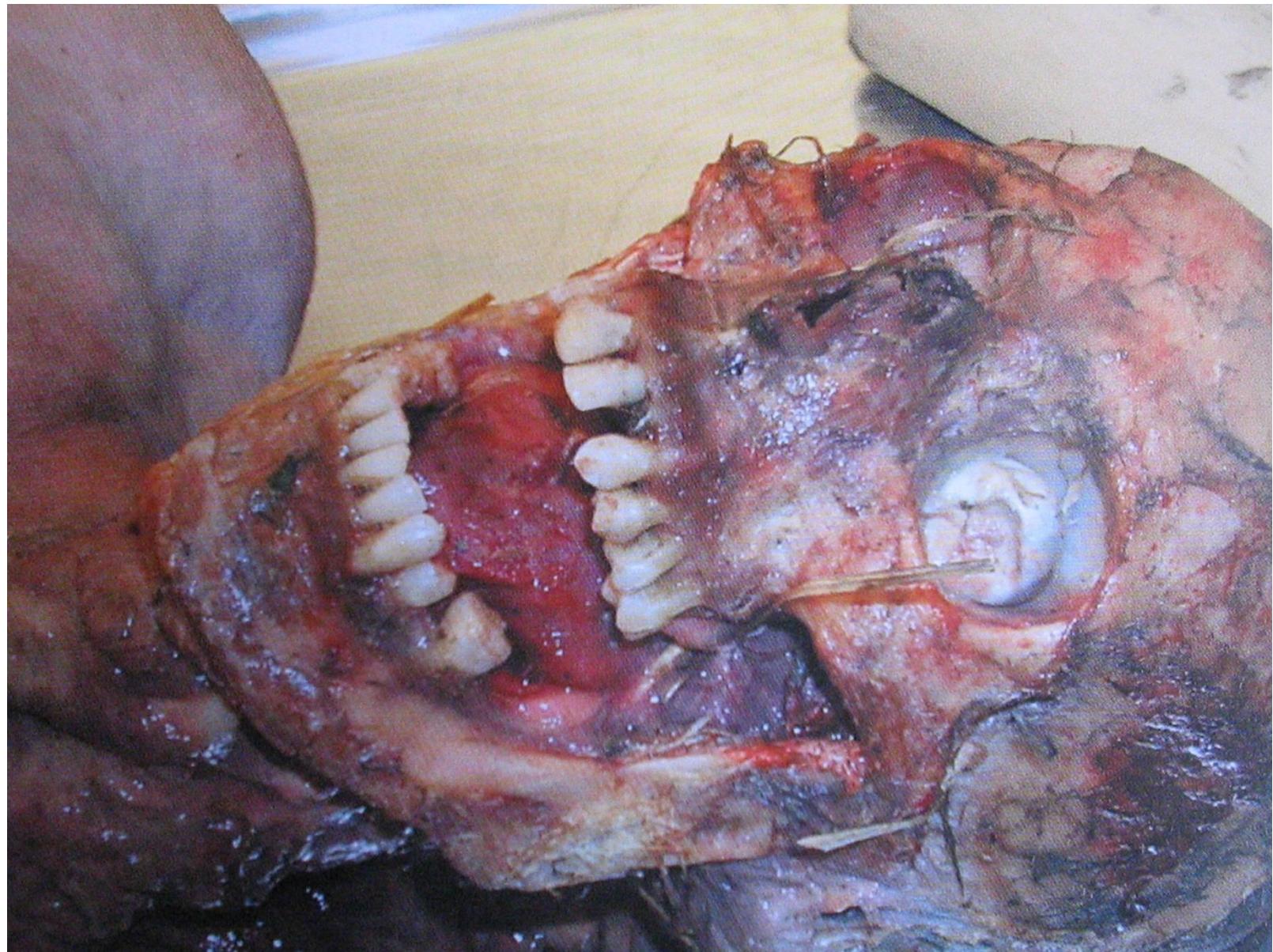
The putrefactive odour will attract insect like flies whose larvae are necrophagous



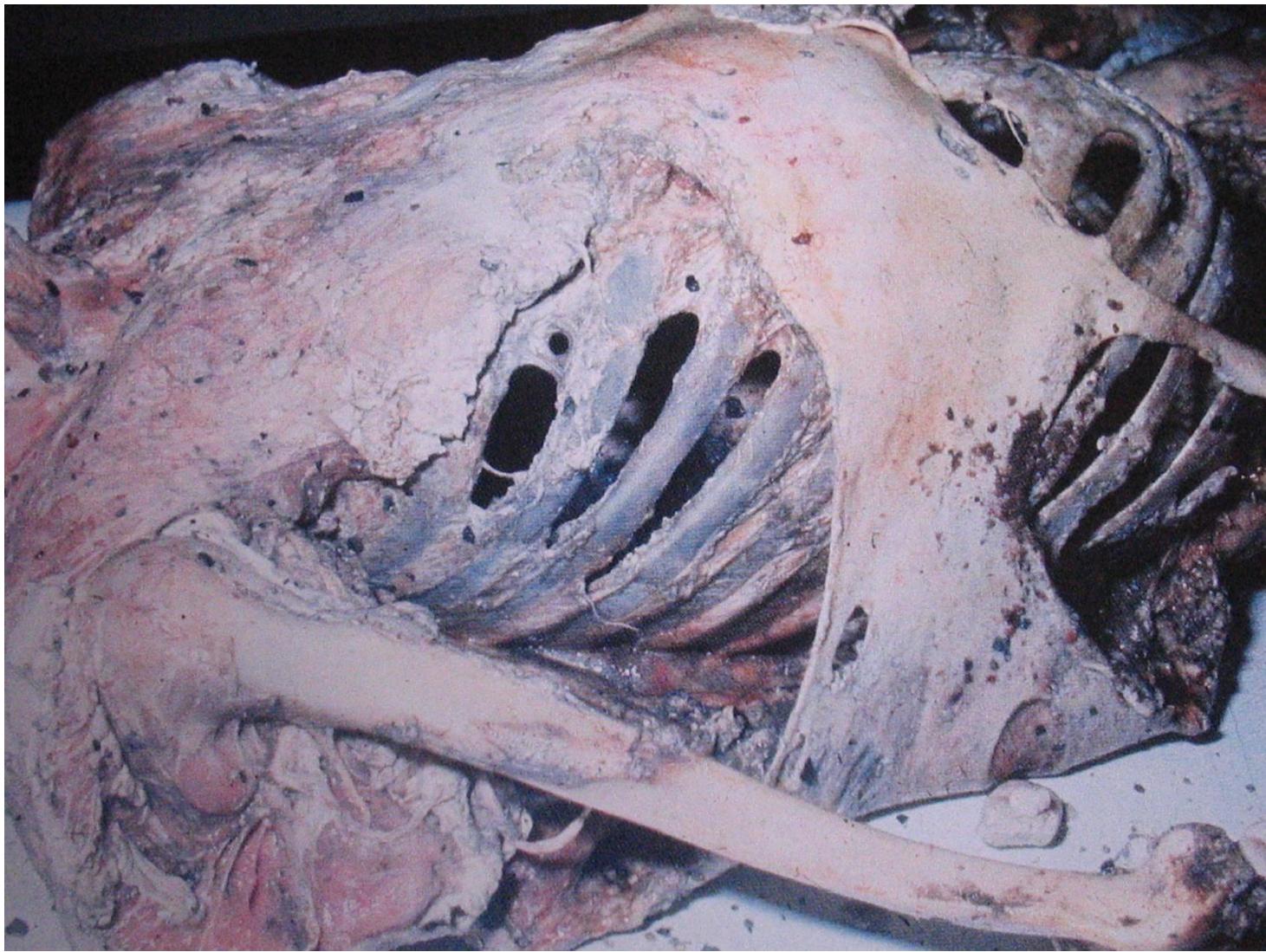


PREDATOR ATTACKS

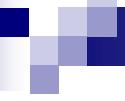
- The exposed bodies are attacked by animals like water monotores, Jackals, dogs etc.
- This contribute to the putrefactive process







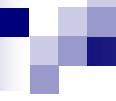




SPECIAL CHANGES

1. Adipocere formation

A chemical change in the body fat which is hydrolysed to a waxy compound. This is a rare phenomenon. This forms a greyish white, greasy, friable substance with cheesy ammonical smell. It needs to have fat and water. The time of onset is highly variable and is between 1-6/12.

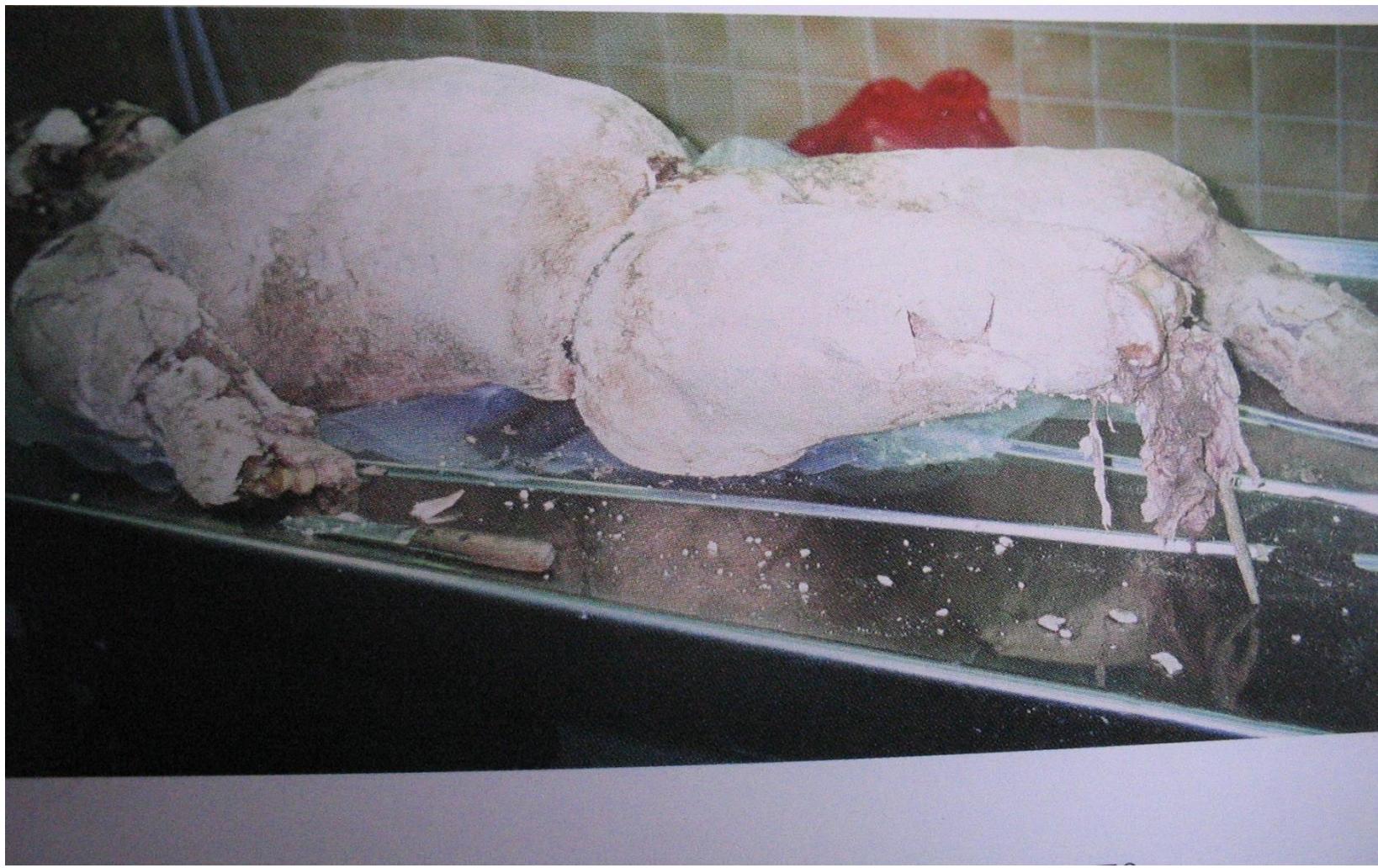


MEDICO LEGAL SIGNIFICANCE

- Condition of disposal
- Preserve external features
- Identification of injuries
- Time since death

Minimum - 3 -6 wks



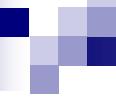




SPECIAL CHANGES

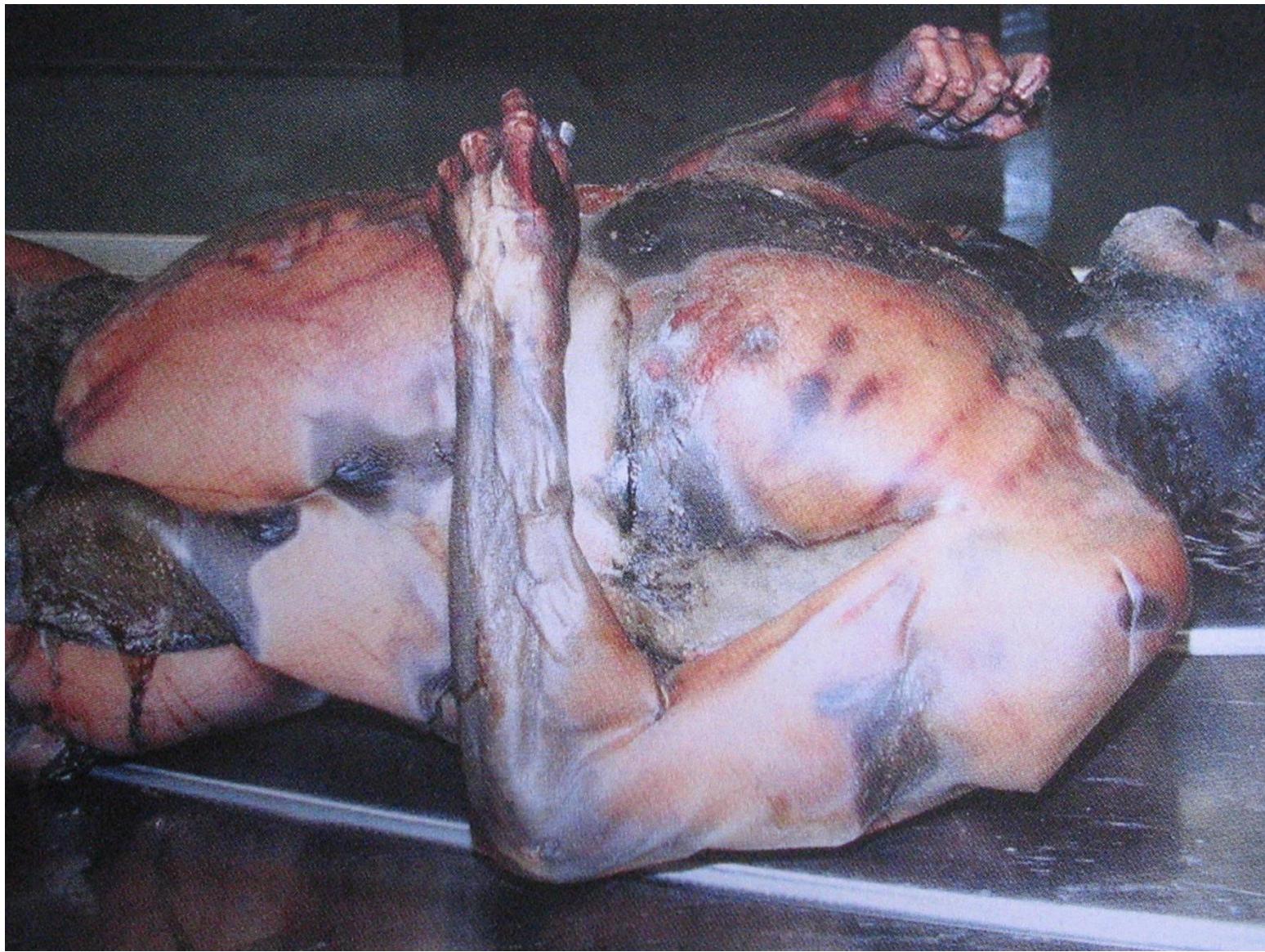
2. Mummification

Needs hot dry and windy condition. Commonly seen in deserts. Tissues will dry and shrivelled preventing putrefaction. This results in stretching the skin. The condition may co -exists with adipocere.



MEDICO LEGAL SIGNIFICANCE

- Condition of disposal
- Identification
- Identification of injuries
- Time since death - 2 - 4 wks

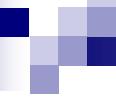






Physiological Functions to Assess Time Since Death

- Emptying of the stomach - 5- 6 hrs
- Passage of foods in the stomach
- Secretion of urine
- Growth of hair



Circumstantial Evidence

- When last seen alive
- Not collected the milk bottles
news papers
- Switching on lights
- Clothing worn