

Cancrum oris (Noma)

Synonyms: noma (from Greek: to devour); gangrenous stomatitis; face of poverty (flourishes where poverty is rife)

What is cancrum oris?^[1]

Cancrum oris (noma) is a mutilating necrotising disease. The consequent [necrotising fasciitis](#), myonecrosis, and osteonecrosis results in destruction of facial structures with severe functional impairment and disfigurement.

Noma is not recurrent and is not transmissible.

Other oral problems are outlined in the related separate article [Problems in the Mouth](#).

How common is cancrum oris? (Epidemiology)^{[1] [2]}

A disease of children (especially aged 2-6 years), it is seen in developing countries, especially in sub-Saharan Africa, with rare cases reported in Asia and South America. The World Health Organization (WHO) estimates that 140,000 people are affected per year.

Some cultures do not treat the disease, as it is considered taboo. This results in a barrier to detection of the disorder and to its appropriate management.

Causes of cancrum oris (aetiology)^[3]

The exact aetiology is unknown but it is caused primarily by a polybacterial infection with secondary ischaemia, particularly in children who are malnourished or debilitated by systemic conditions including - but not limited to - malaria, measles, tuberculosis, and HIV/AIDS.^[1]

Risk factors

- Poverty.
- **Malnutrition.**
- **Immunosuppression.**
- Poor oral hygiene.
- Poor sanitation.
- Living in close proximity to domestic animals.
- **Measles** - common in tropical Africa following an ulcerative gingivitis.
- **Typhoid.**
- Bacillary dysentery.
- **Tuberculosis.**
- **Whooping cough.**
- Leukaemia - a terminal manifestation.

Presentation of cancrum oris^[1]

The course of the disease is very rapid with progression from necrotising stomatitis to full thickness destruction taking just a few days.

- Prior to necrosis:
 - Poor oral hygiene is nearly always present.
 - Excessive salivation.
 - Malodour from the mouth.
 - Grey discoloration.
 - Gingival ulcer formation.
- Followed by rapid, painless and extensive necrosis of the oral cavity, which can involve the cheek, nose, palate and bones.

In 'noma pudendi' there is necrosis of the genitalia and, in 'noma neonatorum', mucocutaneous gangrene occurs during the neonatal period.
[4]

Investigations

- Swabs and culture for organisms – *Borrelia vincentii* and fusiform bacilli are commonly found, as are anaerobes in rapidly progressing cases.^[5]
- Facial X-rays and CT scan to determine the extent of involvement.

Management of cancrum oris^[1] ^[6]

Debilitated patients with established necrotising stomatitis should immediately be admitted to hospital for intravenous broad-spectrum antibiotics, fluid and electrolytes, nutritional supplementation, and supportive medical care. Superficial necrotic tissue and mobile teeth should be removed, followed by frequent irrigation.

Later treatment requires plastic surgery with facial reconstruction and possible repair of temporomandibular joint.^[7]

Complications of cancrum oris^[1]

- Dehydration.
- Sepsis.
- Airway compromise.
- Facial disfigurement.
- Psychological stress.

Prognosis

Noma has a mortality rate of 90% within weeks after the onset of noma if left untreated.^[6]

Further reading

- [Khammissa RAG, Lemmer J, Feller L; Noma staging: a review. Trop Med Health. 2022 Jun 13;50\(1\):40. doi: 10.1186/s41182-022-00431-6.](#)

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