Lingual cellulitis causing upper airways obstruction in neutropenic patients

Smith, O P; Prentice, H G; Madden, G M; Nazareth, B
Correspondence
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consultant in

PMR, 1988; Stockholm, 1988: abstract No 6667), it shows that
many women with HIV infection do not see this as a
reason to terminate a wanted pregnancy. Whether this

will remain true when clinical illness in women and
babies is more apparent, or when women with different
risk factors become pregnant, is being studied.

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O P Smith, H G Prentice, G M Madden, B Nazareth

Lingual cellulitis is extremely rare. When it develops
in neutropenic patients the inflammation and associated
swelling of soft tissue can advance so quickly that a
prompt operation and medical treatment are required
to secure the airway. We report on two immunocom-
promised patients in whom lingual cellulitis resulted in
obstruction of the upper airways that required emer-
gency insertion of a laryngotomy tube.

Case reports

Case 1—A 46 year old man with acute myeloblastic
leukaemia underwent autologous bone marrow
transplantation at this hospital. Six days later,
while pancytopenic (haemoglobin concentration
100 g/l, white cell count <0.1 x 10\(^9\)/l, platelet count 40
x 10\(^9\)/l), he became feverish (38-4°C) and had oral
discomfort. Over the next six hours his tongue enlarged
greatly, preventing him from swallowing and speaking
and causing difficulty with breathing. Computed axial
tomography showed severe oedema of the soft tissue
of the tongue. A laryngotomy tube was inserted through
the cricothyroid membrane and intravenous penicillin
and metronidazole were started. Forty eight hours
later mixed viridans streptococci were isolated from
blood cultures and intravenous amikacin was added to
his treatment. One of the organisms isolated was a
nutritional variant exhibiting satellite growth around
another streptococcus that was subsequently identified
as Streptococcus sanguis. The size of the tongue
decreased rapidly, and the laryngotomy tube was removed
after a further 24 hours.

Case 2—A 47 year old woman was receiving treat-
ment for aplastic anaemia induced by gold (haemo-
globin concentration 67 g/l, white cell count 0.5 x 10\(^9\)/l,
platelet count 46 x 10\(^9\)/l) with 20% neutrophils). Two
days after admission she became feverish (38-9°C) and
developed massive swelling of the soft tissue on the
right side of her tongue. Computed axial tomography
showed oedema of the soft tissue extending postero-
inferiorly into the floor of the mouth. Two hours later
her tongue obstructed her airway and a laryngotomy
tube was inserted as in case 1. Intravenous benzylpeni-
cillin, amikacin, and metronidazole were started.
Forty eight hours later the patient’s temperature was
normal, her tongue had returned to normal size, and
the laryngotomy tube was removed and the stoma
allowed to close. Klebsiella pneumoniae sensitive to
amikacin had previously been isolated from throat
swabs and grown from blood cultures and mouth
swabs taken at the onset of the illness.

Comment

Lingual cellulitis precipitated by invasive bacterial
infection is extremely rare, and no cases have been
reported previously, although lingual swelling due to
haemorrhage has been documented.1-3 In our pro-
foundly neutropenic patients lingual cellulitis probably
resulted from minor local trauma followed by infection
with organisms in the mouth. The mixed infection in
case 1 enabled the nutritionally variant streptococcus
to be recognised early and amikacin added to the
antibiotic regimen. Data on penicillin tolerance in
cultured nutritionally variant streptococci1 and clinical
observations on patients with endocarditis suggest
that all patients should receive combination treatment.

We inserted a laryngotomy tube rather than perform
a tracheostomy because we thought that the severe
lingual swelling would present only a short term
obstruction in the patients. The tube was a fast and
effective means of securing the airway. Enhanced
computed axial tomograms were also of great value in
differentiating between soft tissue of the tongue and
lingual haematoma secondary to thrombocytopenia.
This allowed us to start antimicrobial treatment with
some confidence at an early stage rather than use
platelet replacement treatment. The absence of lingual
swelling by the second day of treatment was further
proof that the swelling was due to oedema of soft tissue
rather than haemorrhage.

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Correction

Bronchodilator effect of atrial natriuretic peptide in asthma

An authors’ error occurred in this short report by Dr G Hulks
and others (28 October, pp 1081-2). The units for plasma atrial
natriuretic peptide concentrations should have read pmol/l, not
nmol/l as published.