Mobiluncus spp: pathogenic role in non-puerperal breast abscess

We report a female patient (we believe to be the first in the United Kingdom) in whom a Mobiluncus spp was isolated from an infected site outside the genital tract. The species may play a role in the causation of non-puerperal breast abscess.

A 38 year old woman presented to her general practitioner with a painful left breast. Three years before, breast implants had been inserted following bilateral sub-mammary excision for benign mammary dysplasia and duct ectasia.

On examination the breast was tender, inflamed, and discharging pus. A swab was taken, and the patient started on ampicillin and flucloxacillin.

The swab was cultured both aerobically and anaerobically and yielded a heavy mixed growth of two anaerobes. These were a Bacteroides species, and a Gram negative curved rod resistant to metronidazole, which was identified by the National Collection of Type Cultures, Public Health Laboratory Service, Colindale as Mobiluncus curtisi, subspecies holmesii.

Anaerobic curved rods were first isolated from the female genital tract in 1913. More recently the possible role of these organisms in non-specific vaginitis and their taxonomic position has been discussed.1

In 1984 Spiegel and Roberts2 compared 22 strains of curved rods (isolated from the vaginas of 22 women with non-specific vaginitis) against phenotypically similar species

Letters to the Editor

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References

in already well described genera. Based on the criteria of biochemical tests, electron-microscopy, and DNA homology, the 22 strains could not be placed in an existing genus. Therefore, a new genus Mobiluncus (mobils capable of movement, uncus a hook, Mobiluncus a mobile curved rod) was proposed. This has a guanine: cytosine ratio of 49–52%.

To our knowledge this is the first isolation outside the genital tract of Mobiluncus sp in this country. There is one report of a confirmed isolation outside the genital tract from the Netherlands,3 and a series of four patients from Belgium4 where it was deduced retrospectively that the isolates belonged to the Mobiluncus genus.

Anaerobic breast abscess due to Bacteroides species, often in association with other anaerobes, has been well documented.6 7 Leach et al5 concluded that anaerobic breast abscesses occur in non-puerperal women with inverted nipples and postulated that the source of the organism was either the vagina or the oropharynx rather than the bowel. In the only confirmed report of Mobiluncus isolated from a breast abscess the patient was not pregnant and had inverted nipples.8 Our patient was also not pregnant and had a prosthetic breast implant following surgery for duct ectasia. The implant would have provided a focus for organisms to settle, similar to the focus offered by duct ectasia or chronic breast disease in patients with inverted nipples, the organism gaining access to the breast either by bacteraemia or by direct transfer from the genital tract. There was no history of vaginal "discharge" at presentation, nor was it specifically looked for, consequently no high vaginal swab was taken at the time.

It seems likely, therefore, that the same mechanism may operate for both Bacteroides and Mobiluncus spp in causing breast abscess, although at present, there have been too few isolates of Mobiluncus spp to be certain.

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References

Detection and importance of \( \beta \) lactamase producing "non-pathogens" in patients with chronic obstructive airways disease

Since \( \beta \) lactamase activity was first described in 1940 by Abraham and Chain1 attention has been directed to its detection and clinical importance in body secretions. In 1945 Gots2 described a rapid method for determining whether organisms produce penicillinase, using a penicillin agar medium inoculated with an organism sensitive to penicillin.

In recent years it has been reported that \( \beta \) lactamase producing "non-pathogenic bacteria" have contributed to the failure of \( \beta \) lactamase treatment in patients with respiratory infections.3 4 The commonest \( \beta \) lactamase producing organisms described are Staphylococcus aureus, Haemophilus influenzae, Haemophilus parainfluenzae, Branhemella catarrhalis and Bacteroides spp.5

This report sets out to show whether such production of \( \beta \) lactamase is clinically important in patients with acute exacerbations of chronic obstructive airways disease (COAD), who are often treated with ampicillin.

Between September 1984 and March 1985 a random selection of sputum from patients with exacerbations of COAD was made. The specimens were cultured for respiratory pathogens and subsequently were examined for \( \beta \) lactamase produced from "non-pathogens" present in the upper or lower respiratory tract.

A modified Gots's5 technique was used using mannitol salt agar containing 1-6 \( \mu \)g/ml of penicillin—that is, four times the minimal inhibitory concentration of penicillin to Staphylococcus aureus NCTC 6571. This was seeded with a four hour brot culture of \( S\) aureus NCTC 6571. Size 4 wells were punched out and half filled with sputoysed sputum (Stat-Pack Dithiothreitol solution, Calbiochem-Behring). The following morning they were examined for growth of \( S\) aureus on the surface of the agar. In those which showed growth the sputum cultures were re-examined, each isolate being tested for production of \( \beta \) lactamase, using Mast intralactam strips. Of the 105 sputa tested, only six showed evidence of \( \beta \) lac-
tamase activity. There were no Haemophilus influenzae producing \( \beta \) lactamase in the group, and examination of the culture of the sputa showed no organisms producing \( \beta \) lac-
tamase.

Of the six positive sputa showing \( \beta \) lactamase activity, culture yielded upper respiratory tract flora in three cases and Strep-
tococcus pneumoniae in three cases, two of which responded to amoxycillin, the third patient died of carcinomatosis of the lung the day the specimen was taken.

The increased incidence of production of \( \beta \) lactamase by Haemophilus spp5 has created a dilemma in the choice of initial anti-
biotic treatment in patients with exacerbations of COAD. In an area with a relatively low prevalence of \( \beta \) lactamase pro-
ducing Haemophilus influenzae (less than 1% in this hospital) it seems that ampicillin is appropriate first line treatment in these patients, in view of the low incidence of \( \beta \) lactamase in their sputum.

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Biphenotypic leukaemia

We previously reported a case of biphenotype leukaemia (T acute lymphoblastic leukaemia and acute myeloblastic leukaemia)