STAPHYLOCOCCAL PYAEMIA WITH PULMONARY AND COLD SUBCUTANEOUS ABSCESSSES

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(RECEIVED FOR PUBLICATION NOVEMBER 4, 1949)

Staphylococcal pyaemia not infrequently complicates staphylococcal lesions, and it is not rare for it to give rise to metastatic abscesses in the lungs and subcutaneous tissues. The following case is considered worth recording, because the patient, a child of just under three years, presented with multiple cold subcutaneous abscesses apparently arising *de novo*, and unaccompanied by severe systemic manifestations.

Case Report

The patient, a girl of 2 years 11 months, was perfectly well until two weeks before admission to hospital. At that time she developed a sore throat, lost her appetite, and became moderately constipated. Her mother also noticed the appearance of a tender lump in the right hypochondrium, which was succeeded by the rapid appearance of similar swellings on the body, neck, and right arm. These lumps were tender, circumscribed, and

increased progressively in size, with slight reddening of the overlying skin, but did not break down or discharge.

During the whole of this time the child's general condition remained good, apart from occasional transient bouts of abdominal pain, the development of an unproductive cough for seven days before admission, increasing pallor, and, for two days before coming to the hospital, obvious pyrexia and fretfulness.

The only significant observation in the past history was an abrasion of the left knee three or four weeks before the onset of symptoms. There was no sickness in any other member of the family, a brother of six years and a sister one year being well.

On admission (April 16, 1949) the child's temperature was 102° F., and she was pale and fretful, but did not appear acutely ill. The tonsils were enlarged and injected, but no exudate was seen. There were a few shotty glands in the left cervical lymphatic chain. Multiple lumps

FIGS. 1a and b.—Photographs taken shortly after admission, showing the subcutaneous abscesses. The one overlying the lower right ribs in the mid-axillary line has been aspirated. Those on the back show well the absence of change in the skin. In Fig. 1a the small scar over the left patella can be seen.

(Figs. 1a and b) were present in the subcutaneous planes of the neck, thoracic wall, anterior and posterior abdominal walls, and the right upper arm. The swellings in the right arm, left neck, right lower anterior thoracic wall and right hypochondrium showed a dusky reddening of the overlying skin. All the lumps were slightly tender on palpation, were well defined, cold, and seemed to be subcutaneous. The lumps in the right lower anterior thoracic wall and in the posterior fold of the left axilla were fluctuant. There was a small healed abrasion on the left knee. No other clinical abnormalities were detected.

The swelling in the right lower anterior thoracic wall was aspirated and blood-stained purulent material was withdrawn. Examination of this showed numerous pus cells with a moderate number of Gram-positive cocci, culture yielding a moderate growth of *Staph. aureus*. A throat swab produced a mixed growth with a few colonies of *Staph. aureus*. A catheter specimen of urine and a blood culture were sterile, and a tuberculin jelly test was negative. The total white cell count was 8,700 per c.mm. (90% polymorphs, 4.5% lymphocytes, 1% monocytes, and 4.5% metamyelocytes). A chest radiograph revealed ill-defined, rounded opacities at the left base and right apex having the radiological appearance of pyaemic abscesses.

Penicillin was given intramuscularly beginning with 250,000 units, then 100,000 units three-hourly for four days, and 40,000 units four-hourly for a further two weeks.

A blood count on April 20, 1949, showed: red corpuscles, 4,800,000 per c.mm.; Hb., 68%; C.I., 0.71; white corpuscles, 26,000 per c.mm. (polymorphs, 67%).

Subsequently ferri et ammon. cit. gr. 2½ t.d.s., 'adexolin' m. 5 b.d. and ascorbic acid mg. 25 b.d. were administered. The abscess over the posterior wall of the left axilla was aspirated on April 21 and thick creamy pus, which yielded a heavy growth of *Staph. aureus* obtained.

On April 22 the subcutaneous abscesses were incised and drained, yellow pus being evacuated, and the cavities packed with vaseline gauze wicks after dusting with penicillin and sulphonamide powder. The post-operative improvement was rapid and all the wounds healed cleanly within a few days.

A second chest radiograph on May 4 showed resolution of the abscesses at the right apex, but little change in the

radiological appearances at the left base. The patient was discharged home on May 12.

Discussion

Reference to the literature confirms the rarity of cold staphylococcal abscesses, and in the 15 years 1923-38 (that is the period immediately before the introduction of sulphonamide therapy) I have been able to find only four reports of single subcutaneous abscesses simulating cold tuberculous abscesses (Milian, 1932; Oury and Le Bars, 1935; Scollo, 1935) and none of multiple lesions.

In the present case the differential diagnosis lay between multiple tuberculous abscesses; multiple pyogenic abscesses; and multiple lipomata.

The pyogenic nature was demonstrated by the isolation of the causative organism and the response to penicillin and surgery. It is uncertain whether the primary focus of infection was in the throat or the abrasion over the left patella.

It is interesting to note the failure of the reactive and immunological body processes as shown by the absence of marked inflammation (that is, no heat, and but slight redness and pain) and the low white count (8,700 per c.mm.) together with minimal general upset. It is significant that, after four days' massive penicillin therapy, the total white count had risen to 26,000 per c.mm.

Another observation of some moment was the extent of the lesions in the lungs without any clinical signs of their presence apart from an unproductive cough.

I am grateful to Sir Cecil Wakeley, under whom the child was first admitted, and to Dr. W. Sheldon, to whose care she was subsequently transferred, for permission to publish this case history. I am also indebted to Dr. Sheldon for his help in the preparation of this paper.

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