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EDITORIAL

THE BURSAE OF THE BODY

The object of this essay is to rescue from oblivion and bring to the notice of the medical profession a neglected class of anatomical structures. Heralded indeed by Monro in 1788 but unsung since, the bursae mucosae have been the Cinderellas of the body, while their ugly sisters the joints have gone out bedecked in villi to every symposium since 1948 (and often return home much the worse for wear and tear). Ensuring the smooth and frictionless working of the body corporate, usually uncomplaining, inconspicuous, hard-working, and very modest in their requirements, the bursae have been so neglected that, even when one of them misbehaves, this is usually misattributed to some more important structure. Textbooks of anatomy deal with the bones and with the articulations, with muscles, central and peripheral nervous systems, sense organs and skin, vascular system, respiratory system, digestive and urinogenital system, and the ductless glands, but the bursae receive only scant and passing mention usually in the section on muscles, and most of them are never mentioned at all.

Similarly in textbooks of surgical pathology the only two commonly mentioned are the subacromial bursa and the prepatella bursa, or "housemaid's knee". With the scarcity of housemaids, even the latter is passing into medical history, following "weaver's" or "lighterman's bottom" (ischial bursitis), "deal-runner's shoulder" (subacromial bursitis) and "miner's elbow" (olecranal bursitis). Yet potentially bursae are of considerable importance and may be the source of yet unrecognized trouble. They are lined by synovial membrane, they secrete synovial fluid, and they are subject to the same ills that joints are heir to.

Prominent amongst these ills are the chronic

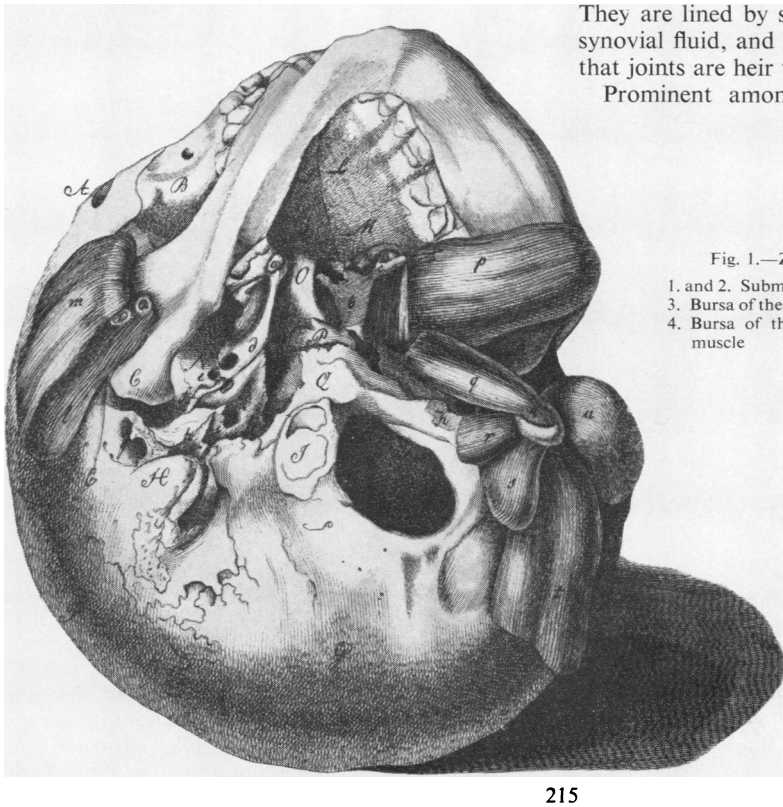

Fig. 1.—Zweite Kuppertafl (III) showing:
1. and 2. Submasseteric bursae
3. Bursa of the circumflex palatal muscle
4. Bursa of the posterior part of the inferior maxillary muscle

inflammatory diseases such as rheumatoid arthritis, possibly auto-aggressive in nature. We have learnt a great deal about this disease: we know that there is a local predisposing factor, so that one joint may be severely involved over 20 years without its neighbour being attacked at all. We know that certain bursae and tendon sheaths are also often involved and may indeed be the only sites of involvement (Ansell and Bywaters, 1953).

It seems probable that some of the illnesses of chronic inflammatory nature witnessed by a high sedimentation rate and the other concomitant acute phase reactions may well be due from time to time to involvement of bursae, unsuspected because difficult to diagnose and undiagnosed because seldom brought to mind. Diagnosis implies suspicion and no disease can be diagnosed unless it be thought of.

Fig. 2.—Dritte Kuppertafl (III) showing:
i. The larger bursa of the infra spinatus
k. The smaller bursa of the infra spinatus
l. Clavicular bursa
m. Acromial bursa
n. Bursa of the coracobrachial muscle
o. Bursa of the pectoralis minor muscle
p. Tendon sheath of the long head of the biceps
q. Bursa of teres major
r. Bursa of latissimus dorsi

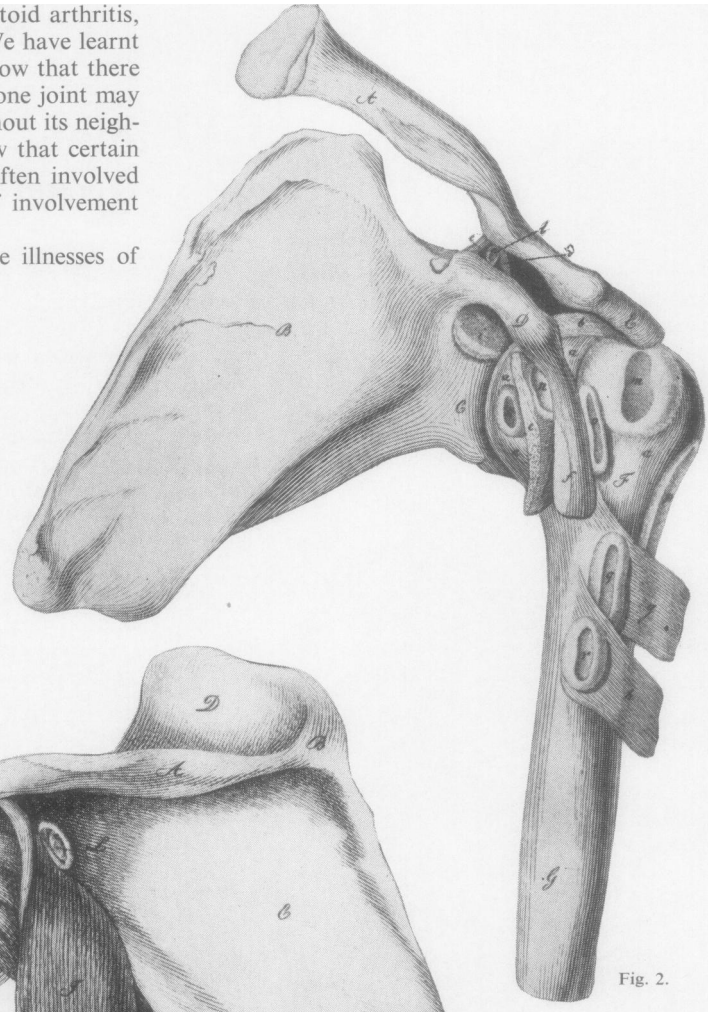

Fig. 2.

Fig. 3.—Vierte Kuppertafl (IV) showing infraspinatus bursa, marked 'L'

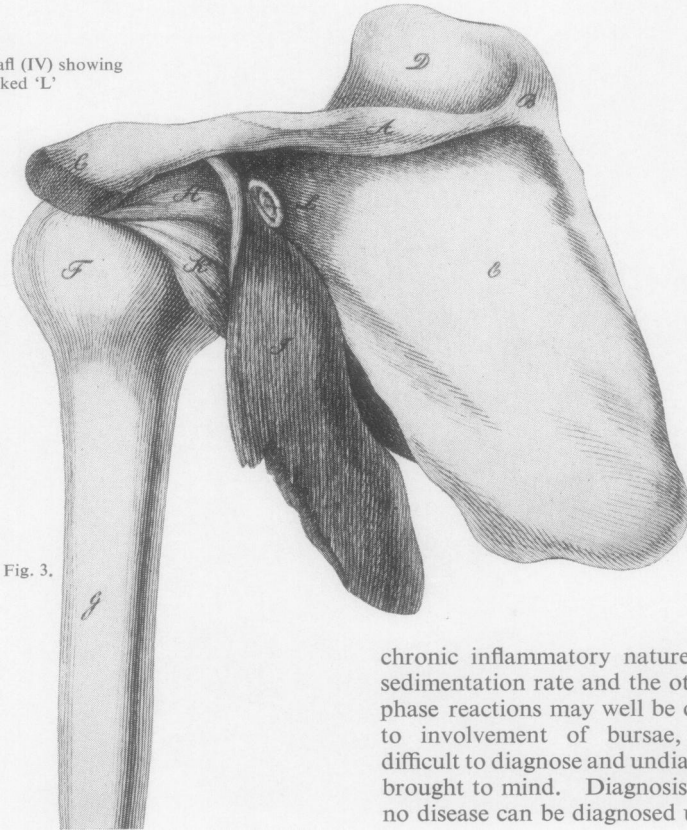

Fig. 3.

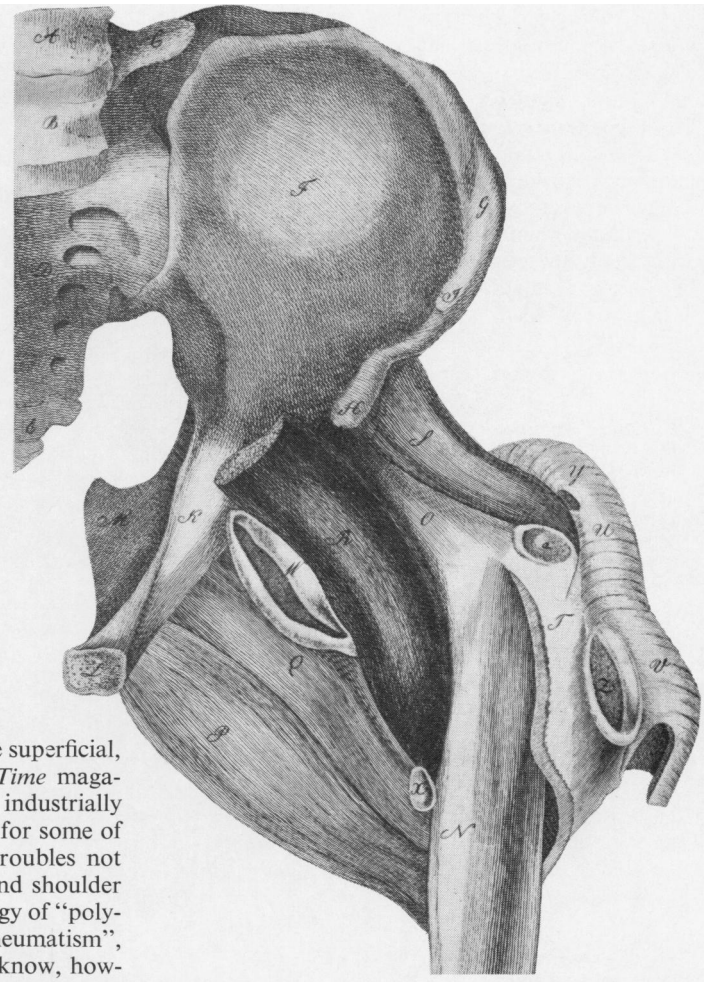

Fig. 4.—Siebente Kuppertafl (VII) showing:
a. Bursa of gluteus minimus
W. Iliopsoas bursa
X. Pectineus bursa
Y. Gluteus medius bursa
Z. Gluteus major bursa

Bursitis is seldom thought of, unless it be superficial, publicly recognized, *i.e.* written up in *Time* magazine, bureaucratically approved, and industrially compensated. But it may well account for some of the obscure, painful, and deep-seated troubles not only in the neighbourhood of the hip and shoulder but also elsewhere. What is the pathology of "polymyalgia rheumatica" or "anarthritic rheumatism", for instance? No one knows. We do know, however, that some cases go on to develop rheumatoid arthritis. It seems possible that these symptoms may well be due to bursal involvement by the rheumatoid process. For this reason we think that the following very brief book review or notice may be of some value, although somewhat tardy in appearance, dealing with the beautifully illustrated study by Alexander Monro secundus, published in Edinburgh in 1788, of which the author recently secured a German edition edited and considerably enlarged by Johann Christian Rosenmüller, published in Leipzig in 1799 in both Latin and German. This magnificent folio volume is divided into ten sections, of which the first is a bibliography, starting with Vesalius (1555) and ending with Lauth (1798), which is reference 91. The original Edinburgh edition of 1788, which may be consulted both in the Royal College of Physicians of London and, I have no doubt at all, also in Edinburgh, has a page to itself and is reference 64. References 66 onwards are all post-Monro, *i.e.* 1789-1799. The second and following sections deal respectively with general observations, saccular bursae, tendinous bursae, enumeration, structure, comparisons, causes of inflammation, index of diseases, and fifteen explanatory copper plates, the crowning glory of this book, some of which are here illustrated (Figs 1, 2, 3, 4, and 5). These Figures have been copied by Schröter from the four simple folding plates of Monro illustrating respectively the front and back of the arm and leg (and some more detailed views) and divided up into various articular areas, adding where necessary further bursae discovered in the following 11 years. In addition, two plates have been inserted illustrating the bursae in the head and neck delineated by Rosenmüller. Monro listed 33 in the arm and 37 in the leg, making a total of 140

bursae. In this Leipzig edition published 11 years later, there are seven listed in the head and neck, eleven round the shoulder (one multiple), six round the elbow, eighteen in the hand (three of them multiple), fourteen in the hip (one multiple), eight in the knee (one multiple), and fourteen in the ankle and foot (two multiple).

This makes more than 78 on each side of the body, a formidable number of structures to ignore. Admittedly these include the tendon sheaths whose involvement in disease is now reasonably well recognized, but there is still a large number of bursae whose study would repay attention.

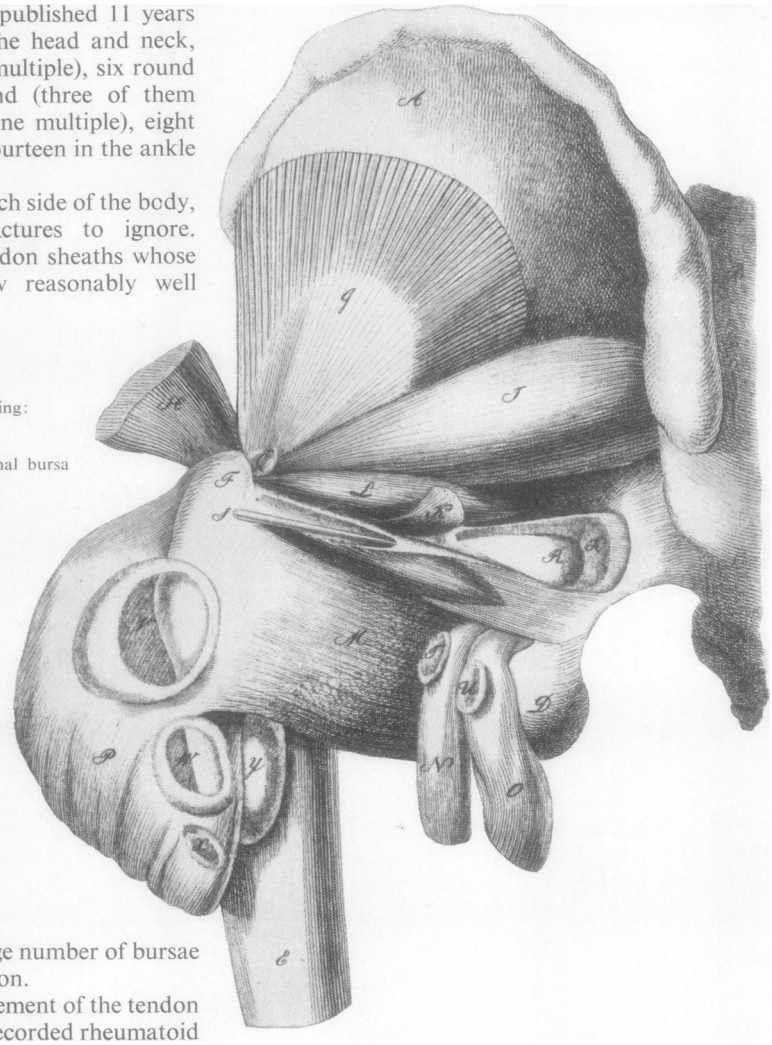

Fig. 5.—Achte Kuppertafl (VIII) showing:
Q. Gluteus medius bursa
R. Obturator internus bursa
S. A probe inserted into the longitudinal bursa of obturator internus
T. Semimembranosus bursa
U. Semitendinosus bursa
V. Bursa of the gluteus major (trochanteric)
WX. Bursa of the gluteus major (femoral bone)
Y. Gluteus major bursa

In rheumatoid arthritis, involvement of the tendon sheaths is well known: we have recorded rheumatoid arthritis starting in the subachilles bursa (Bywaters, 1954): we have seen patients with rheumatoid involvement of the ilio-psoas bursa and of the subacromial bursa, but there must be many other patients in whom, through ignorance or difficulty of recognition, bursitis elsewhere of a rheumatoid nature has remained undiagnosed. This brief essay is made to draw attention to Monro's excellent study and to the possibility of contemporary bursal involvement in diverse parts of the body following trauma, infections, or gout, and, particularly, in rheumatoid arthritis.

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