that the drug is designed to relieve symptoms and should be taken as required within certain limits. However, although this approach may be adequate for drugs with short half-lives, it will not work when a drug provides symptomatic relief but has a very long half-life, such as in the case of the oxicams. In this situation a more rigid regimen is required. As Owen and her colleagues mention, patients need to know about both the nature of their condition and the capabilities of their prescribed medications. A more difficult aspect of compliance is the case where the drug may have no immediate effect on the patient’s symptoms or disease process but may have adverse effects from the start of treatment. This often occurs in chronic diseases such as hypertension, and, of course, rheumatoid arthritis. Here, above all, careful explanation of the rationale behind the treatment is needed, so that the patient perseveres with the treatment to achieve a successful outcome. Information leaflets may help (5). Compliance as a field of investigation, with so many ‘soft’ variables (6), is necessarily a difficult one, but well worthy of the efforts of those attempting to study it and to assess its effects on the patient.

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REFERENCES


TWO-DIMENSIONAL EPIDEMIOLOGY

Epidemiology is a powerful tool in the study of disease. Careful cross-sectional studies of different populations have provided important data on susceptibility and risk factors in many conditions. Ischaemic heart disease and carcinoma of the lung are important examples. The epidemiologists have been able to detect risk factors, such as diet and smoking, and evaluate the power of these associations. Most epidemiology is cross-sectional, but the extra power of longitudinal, prospective data is well illustrated in the case of lung cancer where doctors themselves helped to show that it is as well to stop smoking. The extension of the temporal dimension to epidemiology has also been of value in heart disease: the appalling conditions in German and Japanese concentration camps providing data on diet and heart disease.

Our colleagues specializing in cardiovascular and respiratory medicine must wish that they had more objective historical facts on the incidence of disease. It would obviously be of value to correlate heart and lung disease with diet and other habits through the ages. Sadly the available information from contemporary literature is rarely sufficient to come to any definite conclusions. However, those of us specializing in bone and joint disease have an added source of data—the skeletons of our ancestors. the bony changes associated with the big three of rheumatology: osteoarthritis, back pain and rheumatoid disease are well described (1). We can therefore study these disorders through the ages and add a new perspective to our epidemiological data—or can we?
The history of gout has been documented from the art, literature and medical writings of our ancestors (2), not their bones. But what of the ‘big three’? There have been many speculations on the antiquity of arthritis and back disease, based on a variety of sources (3–5), in addition there has been a recent upsurge of interest in skeletal paleopathology (1), both in Europe and North America, and several recent monographs and publications (6, 7). Unfortunately, some of the resulting conclusions are nearly as bizarre and diverse as the material studied. However, the questions posed are important: Is rheumatoid arthritis (RA) really a recent disease? Does the development of osteoarthritis (OA) depend on how we live? When did ankylosing spondylitis (AS) first develop? Furthermore, the material is available for study—one of us (J.R.) has nearly 3000 skeletons in her attic (not cupboard) waiting to be examined.

The three major problems of the paleopathologist will be familiar to rheumatologists: patient selection, diagnostic criteria and interpretation of data. The availability of skeletons usually depends on archaeological excavation. In some cultures the sick were buried separately and may be missed, in others mass graves result in the excavation of many disarticulated bones which cannot be matched into intact skeletons. When good material does become available it must be examined carefully to differentiate ante-mortem from post-mortem change and for evidence of disease. Diagnostic guidelines or criteria have yet to be formulated, resulting in archaeologists often attempting to attach diagnostic labels from a standpoint of relative ignorance. The reported high incidence of AS in Egyptian mummies is an example; when Zorab (8) re-examined the data of Ruffer (9), he concluded that most of the spinal changes were due to osteophytosis, not spondylitis. Mis-interpretation of data is as much of a pitfall for the archaeologist and paleopathologist as it is for doctors; they feel the need to find an explanation for any observation. An outstanding example is the famous interpretation of femoral shaft periostitis as being proof of ante-mortem rape (10).

Advances are now being made through the co-operation of rheumatologists, archaeologists, radiologists and paleopathologists. Diagnostic guidelines are being formulated and interesting bones examined by a panel of experts. Recent results include the description of many convincing cases of DISH (diffuse idiopathic skeletal hyperostosis) and seronegative spondarthritis in our ancestors, but relatively few examples of typical ankylosing spondylitis or RA (11–13). In addition, it seems likely that the pattern of OA has changed with time (11). More information on the temporal perspective in patterns of arthritic disease should soon be available, and may well influence our approach to aetiopathogenesis.

The history of medicine is worthy of study for its own sake, and the rheumatic diseases have a noble and fascinating past. Furthermore, investment in good paleopathology may provide us with new, important insights into the diseases we see today. Perhaps it is time to put as much effort into studying the temporal perspective as has been spent on the geographical patterns of disease—leading to a two-dimensional view of epidemiology.

PAUL DIEPPE AND JULIET ROGERS

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REFERENCES


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NOTICES

**4th EGYPTIAN CONGRESS OF RHEUMATOLOGY**

Location: Cairo, Egypt.
Information: Secretary-General, 4th Egyptian Congress of Rheumatology, P.O. Box 90, Orman, Geiza, Egypt.

**INTERNATIONAL SOCIETY FOR PROSTHETICS AND ORTHOTICS**

**UK SCIENTIFIC MEETING**

Location: Strathclyde, Scotland.
Information: National Centre for Training and Education in Prosthetics and Orthotics, Curran Building, 131 St. James’ Rd., Glasgow G40LS, UK.

**2ND WORLD CONFERENCE ON INFLAMMATION, ANTIRHEUMATICS, ANALGESICS AND IMMUNOMODULATORS**

Location: Monte Carlo.
Information: Organizing Secretariat, Via Lattuada 26, 20135 Milan, Italy.

**‘GROWING POINTS IN THE TREATMENT OF RHEUMATIC DISEASES’**

**ANNUAL DAY CONFERENCE**

Date: Thursday, 1 May 1986.
Location: Regional Health Authority, Harrogate, Yorkshire, UK.
Topic: Drug toxicity and compliance.
Contributions for possible inclusion are welcomed, especially papers that will provoke lively discussion.
Contact: Dr. Howard A. Bird, Clinical Pharmacology Unit (Rheumatism Research), Royal Bath Hospital, Cornwall Road, Harrogate HG1 2PS, UK. Tel.: 0423 57526.
Prescribing Information
NAPROSYN Tablets (naproxen 250mg per tablet)
NAPROSYN 500 Tablets (naproxen 500mg per tablet)
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Uses: Rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, acute gout and acute musculo-skeletal disorders.

Dosage: For rheumatoid arthritis, osteoarthritis and ankylosing spondylitis: 500mg 6 to 8 hourly taken in two doses at 12-hour intervals. High doses should be used with caution in the elderly. For acute gout: 750mg at once, then 250mg every eight hours until the attack has passed. For juvenile arthritis in children over 5 years: 5mg/kg body weight twice daily. For acute musculo-skeletal disorders: 500mg initially, then 250mg at 6-8 hour intervals as needed with a maximum daily dose of the first day of 1200mg.

Contra-indications: Active peptic ulceration. Hypersensitivity to naproxen or naproxen sodium formulations. Aspirin-induced allergy.

Warnings, precautions, etc:
Episodes of GI bleeding have been reported. Use with care in patients with a history of GI disease. Use with caution in patients with impaired renal or hepatic function. Monitor renal function and consider reducing dosage in patients where renal blood flow is compromised, e.g. is in extracellular volume depletion, cirrhosis of the liver, sodium restriction, congestive heart failure, pre-existing renal disease – some elderly patients may fall in this category. Use with caution in patients with asthma or allergic disease. Caution is required if any of the following is administered concurrently: hydantoins, anti-coagulants or highly protein-bound sulphonamides; frusemide; propranolol or other beta-blockers; lithium; probenecid; methotrexate. NAPROSYN decreases platelet aggregation and prolongs bleeding time, its use in pregnant or breast-feeding women should be avoided if possible.

Side-effects:
Gastrointestinal: nausea, vomiting, pain; occasionally bleeding and ulceration.
Dermatological: hyper-sensitivity – skin rashes, urticaria, angio-oedema; rarely anaphylactic reactions and eosinophilic pneumonitis.
CNS: headache, insomnia, inability to concentrate, cognitive dysfunction.
Haematological: thrombocytopenia, granulocytopenia, aplastic anaemia, haemolytic anaemia.
Other: tinnitus, hearing impairment, vertigo, mild peripheral oedema (patients with compromised cardiac function may be at a greater risk on NAPROSYN); rarely jaundice, false hepatitis, nephropathy and ulcerative stomatitis. NAPROSYN Suppositories (local): rectal discomfort, soreness, burning, itching, rectal bleeding, tenesmus, proctitis.

Basic NHS Cost: Tablets 250mg £0.51 for 60 tablets, £25.98 for 250 tablets. Tablets 500mg £0.78 for 100 tablets. Suspension £7.05 for 500ml. Suppositories £2.53 for 10 suppositories.


Further information is available from: SYNTTEX Pharmaceuticals Limited, St. Ives Road, Maidenhead, Berks. SL6 1RD. *NAPROSYN is a trademark.
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