diseases as well as in pulmonary fibrosis. Sheep cell agglutination tests are negative in a higher proportion of rheumatoid arthritics, but at least positive results are almost always confined to some rheumatic disease. Positive rheumatoid factor tests in rheumatoid arthritis tend to be associated with a worse prognosis. IgG rheumatoid factor and "hidden" rheumatoid factor may be found in seronegative rheumatoid arthritis, but their diagnostic value is outweighed by their technical difficulties.3

A finding of antinuclear antibody is confined almost entirely to serious connective tissue diseases. The test is positive in some 90%, of cases of SLE and has largely replaced the LE cell test. In decreasing frequency it is also positive in Sjögren's syndrome, systemic sclerosis, rheumatoid arthritis, and dermatomyositis as well as in chronic active hepatitis and occasional normal individuals. Antibody to single-stranded denatured DNA is found in 90%, of patients with SLE, in many other connective tissue diseases, and in chronic active hepatitis; antibody to native double-stranded DNA is found in 40-60%, of patients with active SLE but uncommonly in other diseases.4 The extractable nuclear antigen (ENA) test is a good example of how the use of a procedure to delineate a heterogeneous clinical entity, mixed connective tissue disease,4 can be misleading. On prolonged observation the prognosis of patients with positive results was found to conform to their clinical status—SLE, PSS, and so on.5

What tests should be done in the investigation of inflammatory polyarthritis? Besides measurements of the haemoglobin and erythrocyte sedimentation rate a chest radiograph with help to exclude sarcoidosis and carcinoma of the bronchus as occult causes. A low or grossly raised plasma uric acid concentration is a useful finding—though gouty patients may have a normal result. Moderately raised concentrations occur in individuals who are normal, obese, on diuretics, or have occult myeloproliferative disease—as well as after the odd aspirin or two.6 A negative rheumatoid factor test will further stimulate the question for the nail changes of psoriasis and the possibility of Crohn's disease or colitis, Reiter's syndrome or atypical ankylosing spondylitis. A positive antinuclear antibody test should alert the clinician to the possibility of SLE or some other more serious connective tissue disease. Radiographs of hands and feet taken early in the course of disease will be useful later to assess its progress.

2 Litwin, R D, and Singer, J M, Arthritis and Rheumatism, 1965, 8, 538.

Surgical treatment of trigeminal neuralgia

Though we still do not know what causes trigeminal neuralgia, some have argued that it is analogous to a localised form of sensory epilepsy. For this reason phentoin1 and later carbamazepine were introduced into its treatment, with notable success8 confirmed by clinical trials.9,10 Carbamazepine is effective within 48 hours; abolishes the pain or makes it easily tolerated in over 80%, of patients; and, once the balance between therapeutic effect and side effects has been achieved, allows satisfactory maintenance therapy over many years in most patients.

The role of surgery for trigeminal neuralgia has therefore diminished, and most neurosurgeons now have much less experience in dealing with the condition. None the less destructive operations are still necessary in those patients in whom an adequate trial of carbamazepine has proved ineffective, and who have true idiopathic trigeminal neuralgia. The doctor must, of course, identify the rare cases in which trigeminal neuralgia is secondary to an underlying tumour compressing the trigeminal nerve or ganglion, or where it is symptomatic of a plaque of multiple sclerosis in the pons. An age of onset before 50, or other neurological symptoms or abnormal physical signs, are the main indications for investigating such patients.

High success rates have been claimed for various different surgical procedures. Sharp and Garfield9 have recently reviewed their experience in 81 patients of injection of the trigeminal ganglion or root with alcohol. In 71 patients followed up for an average of 3-3 years, 61 obtained complete symptomatic relief and six definite improvement, and in four the pain recurred. Relief of pain was not necessarily associated with total loss of cutaneous sensation. Previously Henderson7 had obtained total sensory loss in 87% of 196 injections, but one year after the procedure some recurrence of pain had occurred in 35%. Injection of the ganglion or root carries no mortality rate, but keratitis due to denervation of the first division of the nerve, cranial nerve palsies due to misplaced injections, dysaesthesiae, and anaesthesia dolorosa (an intractable condition of pain despite evidence of total trigeminal block) are the most common complications encountered.

Other methods of destroying the pain-sensitive fibres have been attempted by injecting phenol into Meckel's cave11 or more recently by radiofrequency thermocoagulation of the Gasserian ganglion and its posterior roots.12,13 Satisfactory relief of pain was obtained in 121 of 135 patients,13 with preservation of the sense of touch, a distinct advantage, in 80%, of patients. Electrocoagulation14 has also been used with less success, but the recurrence rate increases steadily in proportion to the duration of follow up.

For these reasons many workers have considered that a more permanent and complete ablation by fractional rhizotomy (intradural or extradural) is preferable to repeated injections of the ganglion.13,14 Complete relief of pain by this method is obtained in 95%, of patients, and the recurrence rate in most series has been considerably smaller than that obtained by injection of the ganglion. There is an operative mortality rate of 1%,—while complications, including those affecting the eye (10%), facial dysaesthesiae (10-20%), and cranial nerve injury (5-10%), occur significantly more often13 with trigeminal rhizotomy, and must be weighed carefully against the more complete and long-lasting benefits. The incidence of dysaesthesiae after rhizotomy may be lessened by a previous trigeminal injection.

Whatever procedure is used, certain principles apply. Surgical ablation for pain that is not trigeminal neuralgia gives disastrous results, so that accurate diagnosis is vital. The longer the follow-up, the higher the recurrence rate. Pain after rhizotomy which develops in a division unaffected at the time of surgery may be considered to be an extension of the disease rather than a failure of primary treatment; but it obviously requires a further procedure.6 Sparing of the first division of the nerve by a fractional section or injection reduces the incidence of keratitis. Other procedures (retrogressarion rhizotomy, neurolysis, and decompression of the ganglion) have enjoyed...
brief periods of enthusiasm, but unpredictable relief of pain or a higher mortality rate has not encouraged their widespread use.

In the frail and elderly patient with other illnesses the lesser procedure of ganglion or root destruction (by alcohol, electrical, or thermocoagulation) is the treatment of choice. But prolonged follow-up10 shows that 80%, of patients have a recurrence, and thus they may need subsequent treatment. For the younger patient in his 50s or 60s who needs some form of surgical procedure, fractional rhizotomy in expert hands is the preferred method of treatment.11,12 The recent introduction of the operating microscope for this purpose may well lessen its surgical morbidity and perhaps offset the effects of diminishing surgical experience which has often resulted from successful medical treatment.

3 Spillane, J D, Practitioner, 1964, 182, 71.

A wilderness of data

One of the main difficulties in the way of planning the National Health Service or of assessing its effectiveness is the lack of population-based information. There is a plethora of data about the use of hospital services: the problem here is one of statistical indigestion. There are even some data about the use of family practitioner services, though not enough. But there are very few of the facts required to analyse the use of services in relation to the population’s health—to relate the pattern of use to that of morbidity instead of having to rely on the unsatisfactory proxy of mortality. One of the very few relevant sources is the General Household Survey (GHS), now in its fourth year. This survey, conducted by the Office of Population Censuses and Surveys, is based on a national sample of 14 232 people and includes questions not only about subjectively assessed health and incapacity but the use of health services but also about housing, employment, and a variety of other matters, such as smoking habits.

Potentially, therefore, the GHS offers a unique opportunity to obtain both a moving picture of the state of the nation’s health and to relate this information to environmental and social conditions. For example, comparing the 1972 survey with the latest, 1974, data suggests that individuals’ subjective assessments of their health have been getting slightly worse. In England and Wales in 1972 longstanding illness was reported by 197 men and 215 women per 1000. The equivalent 1974 figures were 209 and 229 respectively. Over the same period the reported rates of acute sickness also rose, from 75 to 92 for men and from 85 to 100 for women. Rates increased in all age groups, so the rise cannot be wholly explained by the changing age structure of the population. At the same time the number of general practitioner consultations per person fell marginally, though this seems to have been partly balanced by a slight rise in outpatient attendances. Overall, therefore, the survey results seem to suggest that there may have been a decline, albeit almost imperceptible, in accessibility to health care as measured by the ratio between the care provided and reported sickness.

This is precisely the sort of indicator required if any attempt is to be made to assess the effectiveness of the NHS and the adequacy of the resources provided. Unfortunately, the GHS data may well prove not strong enough to sustain any policy conclusions. There are problems of sample size: as soon as the total sample is broken down into more specific, and therefore much smaller, groups the numbers often do not permit any confident conclusions. More important still, the validity of subjective assessments of both chronic and acute illness needs to be confirmed: quite possibly it is the perceptions of the population rather than its physical health that have been changing over time.

If, therefore, the GHS is to become a useful instrument of policy-making, it will have to be extended and improved considerably. The first survey included information about the use of personal social services, but this has subsequently been dropped because of problems of small numbers and reliability. Yet the relationship between the use of health and of personal social services is crucial for planning and policy-making. So, for that matter, is information about differential geographical access to the health and personal and social services—essential for any investigation of the effects of differences in the distribution of resources. But the GHS regions are different from the NHS regions, and no information can be provided based on areas. There is therefore a case for enlarging the GHS so as to provide such fine-mesh data, both for population groups and areas. Alternatively, it could be replaced by a regular series of local surveys.

The other problem about the GHS data—as with most of the data collected in the NHS—is that it is underanalysed. The annual GHS report does not offer any interpretative analysis or commentary, and the computer used by the Office of Population Censuses and Surveys suffers from chronic constipation—so making it very difficult for independent researchers to obtain the extra information needed to illuminate the printed tables. For example, although the GHS collects information about both health and unemployment little attempt is made to analyse the relationship between the two. In the past, long-term unemployment tended to be associated with ill health, and the assumption was that it was the ill health that caused the unemployment. The latest GHS shows that the unemployed continue to report more ill health than the working population. Given the prospect of a continuing high rate of unemployment more information bearing on this point is needed. Does rising unemployment cause more sickness—mental stress, perhaps—or does it persuade some people to diagnose themselves as ill in order to avoid the jobless label?

The responsibility for commissioning further analyses clearly rests with the DHSS. It may be undesirable that the DHSS should finance most health care research, but while this remains the reality the Department has an obligation to sponsor even the kind of analyses that may prove politically embarrassing. Looking to the future, the Royal Commission on the NHS could usefully consider the case for setting up an independent audit institute for the NHS, charged with monitoring the health service and its effectiveness. Funding such