of symptoms of synovial disease in many cases despite symptomatic improvement after synovectomy.

Though speakers at the conference emphasized early synovectomy, S. Vainio, of Finland, one of the most experienced surgeons in the management of rheumatoid disease, showed that in only 12 out of 201 cases in which he performed synovectomy on the knee could the disease be considered early in that no erosions were found at operation and radiography showed only para-articular atrophy and soft-tissue swelling. R. M. Mason, at the same conference gave some interesting figures from the London Hospital. Of 53 knees subjected to synovectomy in the previous five years results were classified as good in 39 and bad in 9, the patient's assessment of pain as improved in 40 and worse in 8. Asked if, in the light of their knowledge of the operation, they would have it again, 41 patients said yes, 12 no. Long duration of the disease in the joint, strongly positive tests for rheumatoid factor in the serum, and severe radiological changes all counted against a successful outcome. No changes were noted in sedimentation rates or latex titre after operation to suggest that it had any general effect on the disease process.

Two important articles have recently appeared from Denver, Colorado. In a historical review of synovectomy and débridement of the knee in rheumatoid arthritis, S. Geens examines the question of recurrence, the key point in this subject. In 13 series of patients with follow-up periods averaging 3 months to 6 years the incidence of recurrence ranged from zero to 54%. Persistent postoperative hydrarthrosis was common. Geens concludes that synovectomy should be done "during the synovial phase of the disease," when radiographs show normal or almost normal joint spaces. But the malignant type of rheumatoid arthritis with multiple and progressive joint disease often gives poor results. He points out that the long-term effect of early versus delayed mobilization remains to be determined, and considers that the beneficial effect which synovectomy is reported to have on the patient's general condition and on the inflammatory state of the other joints has yet to be substantiated.

The second paper, by Geens and his colleagues, reports the end results of 31 operations for synovectomy and débridement on 23 patients—3 children and 20 adults—between December 1959 and October 1966. All the adults had classic rheumatoid arthritis with multiple joint disease. In all but two cases the disease had run a progressive, active course. Most of them were advanced rather than early cases. Initial improvement followed operation in 79% of knees as assessed by the patient, and in 65% as assessed by the examiner, but definite or probable recurrence was noted in 46%.

It is clear from this study that late synovectomy does not prevent progression of disease and that an initial improvement may go on to deterioration within a few years. A knee with instability and joint narrowing, as these authors point out, needs more than simple synovectomy. But the essential question—For how long does early synovectomy protect a

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**Tortoises, Terrapins, and Turtles**

Any discussion of the occurrence of *Salmonella* spp. in reptiles is likely to be confused by popular nomenclature. The terrestrial vegetarians (*Testudo* spp.) which we in Britain call tortoises are "turtles" in the U.S.A., while the aquatic carnivores (*Emys, Pseudemys*), often called water tortoises, are now commonly known as terrapins in both countries. Both are kept as pets, and both have been responsible for salmonella infections in man. About 85% of imported tortoises harbour salmonellas in their bowels, and the figure for terrapins is not much lower but varies more between one batch and another.

Tortoises are caught wild in Morocco or Yugoslavia. They are naturally coprophagic, and once infected they may harbour the organisms for years without suffering any apparent ill-health. Most of the terrapins which reach the trade have been reared artificially in terrapin farms in the southern U.S.A., where they are fed on meat offal of all kinds, some of which has been shown to contain salmonellas. When awaiting sale in Britain they get scraps of meat and meal worms. How long the terrapins can harbour the organisms no one seems to know.

The danger to man from these sources cannot amount to much. We do not know how many terrapins are sold in Britain, but a few years ago it was calculated that 300 tortoises were imported each year. In contrast to this the total number of reported human infections derived from these reptiles in all parts of the world amounts to perhaps 100 from terrapins and less than 50 from tortoises. It is, however, characteristic of infections from both sources that they have been mostly of young children, as in a case recently reported from Doncaster.1

Tortoises are not cuddly, but the inquisitive child who explores their anatomy in detail is liable to pick up some salmonellas on his fingers. Furthermore, the tortoise who

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basks on the lawn is likely to leave his faeces there and a
cchild may mistake one for a liquorice all-sort. The
danger from terrapins may be greater. Most are kept in
aquaerial indoors, and if the animals happen to be infected the
water will be contaminated. No one is likely to drink
aquarium water except, perhaps, dogs and other pets; but
it must be changed from time to time, and the obvious place
for its disposal is the kitchen sink. He is a handy man who
can do this without splashing, and he would certainly con-
taminate his hands.

Though the danger to health from these animals is a minor
one, children must be protected as far as possible from the
consequences of their own foolishness. There are reasons
for forbidding the importation of tortoises, but these are based
on arguments for the preservation of wild life rather than on
health: in parts of Yugoslavia *T. hermanni* has become rare.
Similar arguments cannot be advanced for terrapins since
they are bred for the trade. It might be possible to treat
all animals with an antibiotic before sale, but the cost would
be high and, from the experience of a few trials, the outcome
unsatisfactory. It is probably wiser to make it generally
known that these animals are a potential source of disease ;
that they should not be handled more than is necessary ; and
that anyone who handles them should wash his hands. The
aquarium water should not be brought into the kitchen but
emptied down the lavatory or an outside drain. There is,
however, little need to cry "wolf." Our dogs and cats share
our lives far more intimately than do these reptiles, and at
least 1% of them are carriers of salmonellas.3

**Switching Pills**

How urgent is the need for a woman taking an oral contra-
ceptive to switch to one containing a low dose of oestrogen ?
Despite statements made in the press and on television, there is no
need for panic action. The right course for a
woman is to continue to the end of her present cycle with
the same pill (or even of another cycle to tide her over the
New Year and the children's holidays) and to talk over the
issue at leisure with her doctor. Some of the factors that
should be considered are discussed in an article in Today's
Drugs at p. 789.

Indiscriminate changing over from some of the higher-dose
pills to the lower-dose pills carries some risk of pregnancy.
What are these risks? The Committee on Safety of Drugs has
said in its circular No. 9 that it has no evidence that
contraceptives containing 50 µg. of oestrogen are less
effective than the others. This must be qualified, and the
three types—the combined, the sequential, and the low-dose-
progestogen-only pills—considered separately.

The committee's recommendations in fact exclude the use
of sequential pills, since none of them contains as little as
50 µg. of oestrogen (in sequential therapy this is an
ineffective dose for British women, giving a pregnancy rate of
about 20 per 100 woman-years). Combined oral
contraceptives containing 50 µg. of oestrogen are by no
means comparable in potency, some being much more
strongly progestogenic than others. Any patient transferred
from one of the higher oestrogenic pills to Anovlar or
Gynovlar will run no risk of pregnancy in the transfer,
because the progestogen in these is strong enough to exert a
potent effect on the endometrium which will prevent
pregnancy should ovulation occur with the drop in
oestrogen dose. But transfer to one with a weak progesto-
genic effect would not give cover if break-through ovulation
occurred. Such an ovulation could occur in the first week
or two on the lower-dose oestrogen pills. Moreover, there
is a real possibility that ovulation could be delayed and
could occur in the first gap after medication or in the first
few days of the second cycle. Thus for full safety other
contraceptive precautions ought to be taken when changing
over to any other of the low-dose pills for six weeks or so, and
not for only the one week suggested by some manu-
facturers, or the two weeks suggested in their circular by the
Family Planning Association. Combined pills are, how-
ever, fully effective when used for the first time by a woman
of normal weight: it is the change-over from a high dose to
a low dose of oestrogen which creates this problem.

The two new low-dose-progestogen-only pills (Norme-
non and Verton, both containing chlormadinone) are not suitable
for women using oral contraceptives for maximum contra-
ceptive effect, because pregnancies do occur—indeed the
pregnancy rate in Britain based on trials in which every
patient is followed up carefully is considerably higher
than the rates quoted by the manufacturers based on huge
transatlantic studies. Certainly any woman taking this type
of pill is running some risk of pregnancy, whether she takes
it from the beginning or transfers to it from a combined
oral contraceptive.

The other difficulty facing doctors is related to the
hormone balance of the pill. Oral contraceptives have been
classified as predominantly oestrogenic, predominantly pro-
gestogenic, and intermediate in overall clinical effect, and it
has been helpful to take into account a woman's own
hormone balance and pre-existing menstrual complaints in
finding a suitable pill to prescribe. Unfortunately all of the
low-dose oestrogen pills are progestogenic in effect, and while
they are probably the most useful category they are not
suitable for all women. Side-effects such as gain in weight,
leg cramps, and headache may occur in the early cycles,
while depression and loss of libido may appear as long-term
effects and require a change to a higher dose of oestro-
gen. Some women may find that the only pill they can tolerate
is one with a high-oestrogen content, and if it is essential
that they should avoid pregnancy this may still represent a
lesser overall risk.

**Syringomyelia and Cavities in the Cord**

The clinical diagnosis of syringomyelia relies on finding
impairment of the sense of pain and temperature, preserva-
tion of the sense of touch and joint position (dissociated
sensory loss), and diminished or absent tendon reflexes.
These signs are normally present in both arms, and there may
be signs of pyramidal disturbance and impairment of the
sense of joint position in the legs. Pathologically there is
cavitation—a syrinx—in the middle of the cord.