Key messages

- Toxoplasma retinochoroiditis usually develops in the second and third decades of life and is generally attributed to congenital infection
- Prevention of toxoplasma retinochoroiditis is considered to be a major benefit of prenatal screening as previous studies have suggested that 80% of congenitally infected children would eventually develop retinochoroiditis
- This report shows that the incidence of symptomatic toxoplasma retinochoroiditis is nearly 100 times higher in black people born in west Africa than in subjects born in Britain
- In subjects born in Britain acute symptomatic toxoplasma retinochoroiditis is much less common than expected, affecting about one fifth of the estimated number of congenitally infected people
- These findings suggest that the potential benefits of prenatal screening for toxoplasma infection in Britain are limited

lesions and on the proportion of retinochoroiditis attributable to acquired rather than congenital infection. These factors could have led to an underestimate or overestimate, respectively, of the proportion of congenitally infected subjects who develop ocular symptoms in the long term.

The benefits of potentially preventing ocular symptoms in the long term need to be balanced against the risks of repeated testing of all pregnant women, the participation of a large number of women falsely identified as infected and those truly infected in unnecessary invasive investigations and treatment, and unnecessary terminations of pregnancy.^{9 15 36 37} Evidence that symptomatic retinochoroiditis is less common than suggested by previous estimates of the prevalence of retinochoroiditis implies that prenatal screening for toxoplasmosis may be of limited value in Britain.

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Randomised clinical trial of ultrasound treatment for pressure ulcers

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One in four Dutch doctors and supervisory nurses in nursing homes thinks that ultrasound treatment is effective for pressure ulcers.¹ McDiarmid *et al* found positive results only in a subgroup of patients with infected ulcers.² We performed a placebo controlled trial of ultrasound treatment for pressure ulcers.

Patients, methods, and results

We randomly assigned 88 patients (median age 81) in 12 nursing homes, to genuine or sham (detuned) ultrasound treatment for stage II pressure ulcers (partial thickness skin loss or worse). Randomisation was done in blocks of four after stratification by nursing home and according to whether muscle was affected (16 patients, yes; 72, no) and ascorbic acid supplements were being given (43 patients, yes; 45, no).

The ultrasound devices had 20 codes randomly divided over the two treatment options. Each patient was assigned a treatment code and treated five times weekly over 12 weeks, or until complete healing of the ulcer. The manufacturer checked the power output of the ultrasound devices every three months. The main-

	Ultrasound* (n=45)	Sham (n=43)	Ultrasound minus sham	Adjusted difference (95% confidence interval)†
Surface reduction cm ²	0.18	0.31	-0.13	-0.12 (-0.30 to 0.06)‡
%	22.91	13.82	9.09	8.27 (-4.34 to 20.88)
Healing velocity (cm)	0.18	0.13	0.05	0.05 (-0.05 to 0.15)
Volume reduction§ ml	-0.29	0.42	-0.71	-0.72 (-1.32 to 0.12)
%	-4.12	15.84	-19.96	-17.41 (-57.85 to 23.03)
Overall clinical assessments from slides:				
Improvement in report mark	0.71	0.46	0.26	0.22 (-0.21 to 0.64)
Clinical improvement (%)¶	27.40	16.51	10.90	9.15 (-3.47 to 21.77)

*Frequency 3.28 MHz, pulse duration 2 ms, pulse repetition frequency 100 Hz, spatial average temporal average intensity 0.10 W/cm², beam non-uniformity ratio < 4, effective radiating area 4 cm².

†Adjusted for 60 covariables clustered in eight clinically cogent clusters.¹

‡Power to detect weekly difference of 0.2 cm² or larger is 71% ($\alpha=0.05$; one tailed test).

§Measurements available for 11 and 14 patients in the ultrasound and sham groups respectively.⁴

||Report marks were scored on a scale from 1 (bad) to 10 (excellent).

¶Scored on a scale from -100% to 100%.

tenance of double blind conditions was checked two and 12 weeks after randomisation. For each patient we chose one ulcer, preferably on the trunk. Patients taking systemic glucocorticoids were excluded. Nursing care consisted of identical water beds, three hour repositioning, and once daily gentle cleansing of the wound with saline, enzymatic or surgical debridement being performed when indicated. Ulcers were covered with paraffin and hydrophilic gauze. We measured 60 covariables, varying from age and mobility to serum zinc concentrations, at baseline. We took colour slides at baseline and after 1, 2, 4, 6, 8, 10, and 12 weeks. The trial was approved by the ethics committee of the University Hospital of Maastricht.

The table summarises the trial outcomes. We used the slides to measure changes in surface area and in a clinimetric index rated by an expert panel. We avoided measurement bias by working blind to treatment and time of follow up. After 12 weeks 40% (18/45) of ulcers in the ultrasound group and 44% (19/43) in the sham group were closed. Wound survival analysis (Kaplan-Meier) did not show significant treatment differences ($p=0.61$, log rank test, one tailed). A per protocol analysis showed that outcomes were almost identical in a subgroup of 64 patients who had no other interventions, whose compliance with treatment was at least 80%, and whose measurements were unproblematic. Whether patients were to be excluded from the analysis was decided before the treatment code was broken.

The number of baseline prognostic covariables precluded the use of common multivariable techniques. We therefore grouped the covariables into eight clinically cogent clusters and used the clusters to control for

confounding.³ For example, wound status had three values (bad, normal, good) depending on whether muscle was affected, the age of the ulcer, the estimated time for closure, and the median report mark of the panel. Cut off points and the clusters were decided before the treatment code was broken. The influence of loss to follow up (11 patients) was estimated in a sensitivity analysis in which the trend of each drop out was extrapolated using the sham group trend (reported here), the patient's treatment group trend, and deletion (omitting such patients from the analysis).⁵ Results of all analyses were almost identical.

Results in our subgroup of 75 patients with infected ulcers did not confirm the positive results of McDiarmid *et al.* For infected ulcers we found no treatment differences in surface reduction and the clinimetric index. After 12 weeks 39% (15/38) of ulcers in the ultrasound group and 41% (15/37) in the sham group were closed. Kaplan-Meier analysis did not show significant treatment differences ($P=0.46$, log rank test, one tailed).

Comment

A problem with testing ultrasound treatment is the large number of treatment characteristics. After consulting experts and reading published work we selected parameters with the highest chance of success, but we could not show that ultrasound treatment was clearly beneficial. This finding may also indicate the low therapeutic potential of other forms of ultrasound treatment for pressure ulcers.

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ONE HUNDRED YEARS AGO

ALTRUISM IN MEDICINE.

We have it on high authority that medicine is the most altruistic of professions. It is doubtful whether such a statement is nowadays correct. The struggle for existence yearly becomes more severe. The daily practitioner daily treads more closely upon the heels of the consultant, whose duties thus tend to become more and more circumscribed. The highest members of the profession are thus less and less able to help their younger brethren who are striving to attend a similar position. Never again can there be such a succession as that of Radcliffe, Mead, Pitcairn, and Baillie, in which each handed on to his successor the influence he had himself attained, and thereby enabled each member of the band to hold a better position than his own. Although this form of altruism is no longer possible in the crowded ranks of our profession, where each fights for himself, much can be done, and much more should be done, to afford moral support to the younger and more hardy-worked teachers. Teaching is of

necessity an unsatisfactory occupation, for the results are scarcely ever apparent to the teacher himself. His reward lies in the far distance, when in the fulness of time his pupils look back to his work with grateful hearts, not so much for the facts which he has taught them as for the influence which he has exerted over them and for the bias he has given to them at the most impressionable period of life. It behoves the medical schools, therefore, to select as teachers men of known probity, many-sided, and of a wide knowledge as may be obtained. Such men, indeed, are rare, and are usually diffident of their own powers—for self-confidence, even in medicine, often bears a direct ratio to ignorance. It kills the best men to go on year after year in the drudgery of teaching; yet how often could their labours be lightened and their lives rendered happier if their superiors were more truly altruistic. How rarely in a large medical school is a word of sympathy or of praise accorded to an overworked and underpaid demonstrator by any of the senior officers. (*BMJ* 1895;ii:37.)