valuable resource (even though we have about 2500 referees on our database) and because we are the best judge of issues like whether the paper belongs in the *BMJ* or another sort of journal. Our target is to reject the papers not sent to external referees within two weeks, and we hope that this information may lead more authors who have scientifically sound papers but are worried that they may be too specialist for a general audience to let us see them. They will have lost little time if we do decide that they are too specialist.

The 2500 or so papers that are sent out go to one or more referees, and we ask the referees to return the papers within two weeks. Most of our referees are extremely busy, and they don't always manage to return the papers in time, although most of them do. This is the weakest link in the chain, and we have a system for chasing referees and eventually going elsewhere. One factor here is that we are increasing the number of referees we use outside Britain, and this may sometimes increase delay, although electronic communication is shrinking the globe fast.

Once returned the papers are considered by an internal editorial committee, and the 800 or so that may merit publication are passed on to one of our two "hanging committees" (named after the committee at the Royal Academy that decides which pictures to hang in the summer exhibition). Both hanging committees comprise two practising clinicians, a statistician, and two medically qualified editors; for the "general practice hanging committee" both clinicians are general practitioners. These committees make the final decision on publication, although we ask for almost every paper to be revised before publication. About 13% of papers submitted to us are published, and we aim to make this decision within eight weeks.

We expect that our median time to this decision will be less than eight weeks, and we have, in exceptional circumstances, peer reviewed papers and published them within a fortnight of submission. But just as all doctors have patients who consume disproportionate amounts of time so we have papers that slow us down. Sometimes we have problems finding a referee, or the perfect referee has gone to sea for a month, or the referee loses the figures and takes three weeks to ask for copies, or we have a furious debate over a paper at the hanging committee and decide that we need another specialist opinion. Authors can imagine for themselves how our process may stall, and we obviously have to balance the quality of the decision making against its speed.

The time to publication depends partly on how many papers we accept. All editors live between the Scylla of having insufficient papers in the system to allow efficient publication and the Charybdis of taking too long to publish. We must balance how many papers we accept and how many pages we have available. Our target is to publish original papers within eight weeks of final acceptance.

If targets are to have any meaning then they must be neither too easy nor too hard. The data we have at the moment suggest that we should reach our targets about 80% of the time, but our aim over the years will be not only to reach the targets in a higher proportion of cases but also to make the targets more difficult.

RICHARD SMITH

Editor, *BMJ*

# Laser treatment of portwine stains

## *Newer lasers bring better treatments*

A decade ago the argon laser was hailed as a "new ray of hope for portwine stains."[1] Was this optimism justified, and what of more recent rays of hope?

Portwine stains are composed of networks of ectatic vessels in the outer dermis under a normal epidermis. These birthmarks do not fade but mature and darken with age, with the relatively normal vessels of a juvenile mark undergoing degeneration with dilatation and stasis. About three per thousand children are born with a portwine stain. Regarded as untreatable before the advent of the argon laser, these stains almost always have a devastating effect on the person's quality of life.[2]

Many different argon laser techniques have been described,[3,4] but after analysis these are essentially the same, with laser-tissue interaction times that exceed the ideal (see below) by at least one order of magnitude. Success rates of 60-85% (subjectively assessed) have been reported for the treatment of mature portwine stains on the face in older patients.

The results in children, particularly younger than 10, are much less favourable. Severe atrophic or hypertrophic scarring occurs in at least 2% of adults and up to half of children.[3] Minor changes in the texture of the stain occur in half.[5] Histologically, the skin heals with a dermal scar[6] due to the non-specific accumulation of heat. Various computer assisted scanning devices have improved the results, and the European Community Haemangioma Working Party has stated that an argon laser should not be used without one of these devices or to treat children.[7]

Ideal treatment, by selective photothermolysis,[8] requires a wavelength that is minimally attenuated by epidermis and dermis and strongly absorbed by blood. Wavelengths of 577-590 nm are predicted as optimal, depending on the dermal blood content, and 585 nm is a good compromise.[9,10] Pulse durations of 0·5-5 ms produce only transmural injury to the vessel wall, by heat conduction from the hot red cells,[9] and hence prevent non-specific dermal injury. The spot size should be at least 3 mm and energy density 5-8 J/cm$^2$ to ensure deep injury of ectatic vessels.[9]

The argon laser cannot produce these ideal parameters, and neither can any of the recently introduced lasers such as the copper vapour,[11] the continuous dye,[12] and the frequency doubled neodymium yttrium aluminium garnet lasers.[13] Despite a limited, well documented depth of vascular injury[14] the argon laser in combination with automated scanning devices is often still considered the treatment of choice in mature portwine stain.

So far only the pulsed dye laser produces parameters that approach the theoretical ideal, and even then it is at the lower limit of the ideal pulse duration; Tan *et al* have shown that this laser can successfully treat children of any age with a negligible chance of scarring,[15] and our experiences confirm their findings. Although the pulsed dye laser is often considered of limited value in mature portwine stain, Tan has recently reported excellent results.[16]

Although the argon laser offered the best available treatment for a time, newer lasers have now superseded it. With output parameters within the ideal boundaries, the pulsed dye

laser provides far better results, particularly in children. In view of its clear advantages over the other lasers, whose rate of energy delivery does not match the predicted physical behaviour of the blood vessels, we suggest that the pulsed dye laser should be offered as the first line treatment for portwine stains whenever possible.

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# Treating persistent glue ear in children

## *More patience, less surgery*

Glue ear, or more precisely otitis media with effusion, is the major cause of hearing problems in children. How should it be managed? Currently, about one child in 200 in England is treated surgically for the condition each year, making it the commonest reason for elective surgery in children. On the basis of a literature review the most recent *Effective Health Care* bulletin questions such frequent intervention.[1 2]

Its authors recommend a period of "watchful waiting" before proceeding to surgery. They also recommend large trials to examine the effectiveness of a range of interventions, which should look at broader outcome measures than just hearing loss. They base their recommendations on an analysis of 19 randomised controlled trials that examined the effectiveness of surgical interventions for glue ear. Most attention was given to the three trials that used hearing level as an outcome measure.

The authors recognise the many methodological problems in studying disabilities that may result from hearing impairment. Social functioning, speech, language, learning, and behaviour may all be affected. They quote the comprehensive review by Haggard and Hughes, which states that glue ear probably causes considerable disability only if it results in persistent impaired hearing starting at an early age.[3] In the Dunedin study children with persistent effusions from a young age had problems with learning, language, and development at least until they were aged 7 to 9.[4] Whether these problems are temporary or not is still unclear.[5] Other crucial questions—for example, does surgical intervention prevent problems at school and of language—are still unanswered.

The bulletin suggests that grommets and adenoidectomy, either alone or in combination, reduce mean hearing impairment by less than 12 dB at six months, and that this improvement falls with time. Myringotomy and tonsillectomy, either alone or in combination, are ineffective. Despite these unpromising results and the fact that most episodes of glue ear are of short duration and resolve spontaneously (50% within three months; 95% within a year) the "epidemic" of surgery for glue ear continues.

To reduce surgical activity for glue ear the authors recommend a period of continued observation and testing in children with bilateral hearing impairment of 25 dB or more. This guidance should exclude from surgery most children whose effusions will resolve quickly. Children on waiting lists should be reassessed to ensure that intervention is still required. This presupposes the existence of good audiological services.

The bulletin lists the side effects of grommets: tympanosclerosis, increased incidence of chronic perforation, and possibly cholesteatoma. A cohort of children, originally seen aged 2 to 4 with severe effusions and mostly treated with grommets, had structural damage of the eardrum (87% of cases), abnormal tympanograms (45%), and a mean hearing loss of 13 dB when followed up at the age of 8.[6] Whether such substantial damage resulted from surgery or the disease itself is not known: what is certain is that a very restrictive policy regarding the insertion of grommets is necessary.[6] Unlike grommets, adenoidectomy seems to modify the underlying pathophysiology of chronic otitis media with effusion[7]—making it our initial surgical procedure of choice in cases of severe, persistent effusion. Whether antibiotics could be a satisfactory alternative to surgery in the long term is unclear; some studies show possible short term benefits.[8 9]

Ideas about the pathophysiology of glue ear are changing, with attention shifting from obstruction of the eustachian tube to dysfunction of the tube and immunological mechanisms. In some—perhaps most—cases effusion may be a normal reaction to an upper respiratory tract infection. Surgical intervention would therefore be unjustified.

Upper respiratory tract infections, especially acute otitis media, are the most important determinants for the development of an effusion. Acute otitis media and otitis media with effusion are associated—they may be different aspects of the same condition. Prognostic factors, such as age less than 2 and