tangles, granulovascular degeneration, and congophilic angio-
pathy. A correlation has been shown between the degree of
dementia and the number of senile plaques.4

These senile plaques consist of a dense core of extracellular
amyloid, surrounded by mitochondria, lysosomes, and axonal
boutons. Affected areas show increased oxidative and hydrolase
activity.2 Immunoglobulins have been shown to be associated
with amyloid in the senile plaques.5 The cells concerned may
be macrophages or microglia or both: such cells are in-
vitably found with the amyloid that is detectable in the brains
of aged dogs.6 The congophilic angioathy is due to amyloid
in the subendothelial layer of cerebral capillaries and in
the intima and media of cerebral arteries and veins; the source
of the amyloid is probably the serum.7

Myeloproliferative disorders are more common than would
be expected in first-degree relatives of patients with
Alzheimer’s disease8; this may be due to a primary or second-
ary abnormality of the microtubules dealing with cell division.
No definite association has been found between Alzheimer’s
disease and any of the major histocompatibility haplotypes.
No lymphocyte abnormalities have been found after comparison
with controls matched for age and sex. Serum antibodies
against neurones have been identified, but in detailed studies
done in Glasgow and London these antibodies have also been
shown in patients with other conditions (H Watts, P Kennedy,
M A Thomas, paper in preparation). Studies on cerebral
concentrations of aluminium and silicon have yielded con-
flicting results, but there is some evidence of an increase in
patients with the disease.9 No virus has been isolated or trans-
mitted from patients, but one important discovery has been
that senile plaques appear in specific strains of aged mice when
these are infected with certain scrapie agents.10 11

Disturbances in the metabolism of neurotransmitters have
been widely reported, affecting in particular the cholinergic
system and resulting in depletion of choline acetyltransferase
and acetylcholine esterase.12-13 These findings suggest that
there is either loss of cholinergic cells or degeneration of
cholinergic terminals. In clinical studies in which patients were
given choline or choline-containing substances, however, these
agents were ineffective in improving or halting progression of
the illness. Recently a far wider disturbance of neurotrans-
mitter systems has been postulated, with the dopamine,
gamma-aminobutyric acid, and noradrenergic systems all
affected.14 15

Despite the plethora of hypotheses, however, objective
analysis of all the data—immunological, genetic, virological,
pathological, and biochemical—shows that we still have no
idea of the aetiology of Alzheimer’s disease.

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Audit in general practice

Whoever coined the phrase medical audit has a lot to answer
for. In everyday speech, auditors are cold, authoritarian figures
who visit an organisation to detect fraud, incompetence, or
inefficiency and report back to some central organisation.
In medical practice, audit is a self-monitoring procedure carried
out by doctors on their own work and reported only to the
participants. Yet the authoritarian image persists and was
present, like Banquo’s ghost, for much of the day at the
conference last week at BMA House on medical audit in
general practice (p 1440). If nothing else resulted from that
meeting, it should finally have stilled any fears among GPs that
the BMA’s General Medical Services Committee or the Royal
College of General Practitioners, who jointly organised the
occasion, had any plans for a corps of inspectors.

Like many new concepts in medicine, audit has not always
been helped by the efforts of its enthusiasts to convince the
doubters. Talk of process and outcome and of a whole plethora
of abstract concepts clouds the simplicity of the idea: that
doctors should look at their daily work to see if they can
improve it. The examples described at the conference were
everyday problems. Are all the home visits by the practice
nurses necessary? How helpful are midstream urine examina-
tions in treating urinary infections? Could the care of epileptic
patients be improved? In such cases, the doctors in a group
practice can learn an enormous amount by recording exactly
what they do, comparing their actual practice with what they
thought they did, and deciding after discussion among them-
selfs what they will do in future. The crucial step, however, is
the final one: repeating the exercise after an interval to see
whether the good intentions have actually been carried through.

What the advocates of audit now need to do is to convince
the sceptics and the silent, indifferent majority that the effort
is worth while. Many innovations in general practice are
intellectually stimulating but make little difference to the
quality of care provided to patients. Do auditing procedures
have longlasting effects—and how can these be measured?
The evidence so far is very persuasive. The enthusiasts should
recognise, however, that many general practitioners will want
to move at their own pace—as they did in adopting ideas such
as health centres and group practice premises, attached nurses,
appointment systems, and deputising services. These have
come into the mainstream of general practice because the
majority became convinced that they were cost effective and of
real practical value. If medical audit passes the same pragmatic
tests it, too, will become routine within a generation.