The treatment of tinnitus—a historical perspective*

by

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The First Approaches

Tinnitus has existed as a symptom of ear disease for as long as man has been able to express himself to his fellow man. Tinnitus and its treatment has featured in many aspects of tribal medicine. Politzer (1907) described the belief of the Annamite tribe in eastern India, which held the belief that the ear is inhabited by a small animal. If it is engaged in a fight with similar animals or upset by a foreign body, tinnitus results. Such disorders were treated with fumigation in which the skins of non-poisonous snakes were burned.

The first written account of medical treatment came with the Egyptians and Mesopotamians. The Egyptian remedies were written on Papyruses which were copied and re-copied by generations of priest/doctors, and most of the Egyptian writing on the ear was concerned with the treatment of otitis media (Kamal, 1968). The main medical (non-surgical) papyrus to have survived is the Ebers papyrus which dates from the beginning of the 18th Dynasty (sixteenth century B.C.) and almost certainly includes many treatments which are much older. In paragraph 678 there is a treatment for a ‘bewitched ear’, presumably one with tinnitus, which describes the infusion of balanities oil and frankinsense together with two other unknown ingredients into the ear. Frankinsense and balanites oil were quite extensively used by the Egyptians in the external treatment of ear disease.

In a much later papyrus from Crocodilopolis (?late second century A.D., with some treatments dating back to the sixth century B.C.—Reymond 1976), there are two specified treatments for ‘humming in the ears’. Both entail insertion of a reed stalk into the external meatus. The first treatment applied through this comprised a mixture of drugs, the second only one. The mixture used in the first treatment consisted of sap of black reed, a measure of herbs, salt, one halwort, oleo-resin, oily ointment and sap of lotus. The second comprises the fresh medicinal oil of rose, strained and applied.

Unlike the Egyptian remedies, the Assyrians or Mesopotamian medical treatments were recorded on clay tablets of which over 600 dealing with medical texts have been discovered. Many of these were translated by Campbell Thompson of the British Museum in the early part of this Century. While they contain more reference to ritual than is found in the Egyptian treatments, many important drugs such as opium, belladonna and cannabis were used by the Assyrians. The tablets date from 700 B.C. at the latest.

The texts, translated by Campbell Thompson (1931) and dealing with ear troubles, include over 20 specifically related to tinnitus. Three different types of tinnitus were specified: ‘singing’ of the ears, ‘whispering’ of the ears and ‘speaking’ of the
ears. Some incantations and treatments were specific for tinnitus in either the left or right ear. In fact the ear is specified only in cases in which the ear is ‘whispering’ or ‘speaking’ rather than ‘singing’. It is also of note that only in these particular cases is an oral remedy indicated, and in each case one which has a purgative effect, i.e. tumeric, dates, wheaten bread, mustard in beer, etc., and which should be taken for only seven days. It is unfortunate that we do not know the differentiation which the Assyrians meant when they referred to such ‘whispering’ or ‘speaking’ in the ears, as opposed to ‘singing’. ‘Whispering’ could well refer to hissing tinnitus and ‘singing’ to ringing tinnitus, but the concept of ‘speaking’ remains more problematical, unless the writers were concerned with auditory hallucinations.

The treatment of the ‘whispering’, like most of the treatments of ‘singing’ in the ears, was accomplished by incantations ranging in length from: ‘Whoever thou may be, may Ea restrain thee’ to:

“It hath flown against me
It hath escaped the earth
It hath attacked me . . .
O seven heavens
Seven earths
Seven winds
Seven hurricanes
Seven fires
Seven backs
Seven sides . . .
By heaven be ye exorcised
By earth be ye exorcised
Fly away like a bird of the heavens.
Rise to the sky like smoke
Like a rainstorm disappear in the ground!
May the magic of the word of the great
Lord Ea of Eridu be not annulled.”

Ea, lord of water, who featured in both these charms, was worshipped by Assyrian physicians as their ancestor (Sigerist, 1951). He was cited in many of the chants associated with the treatment of disease, many of which, like the second cited above, had magical connotations. This is related also to the causation of the tinnitus, sometimes cited as: ‘If when the hand of a ghost seizes a man, his ears sing . . .’.

Despite this, the majority include some pharmacological treatment which came in at least one of three versions: these were fumigation, involving a variety of substances, usually derived from trees or herbs, but sometimes from animal materials, such as horn and bones; insertion of wool soaked in or treated with various materials into the ears; or direct administration of drugs to the ears sometimes via a bronze tube. These drugs might include such diverse materials as arsenicals and extract of roses. Other components of the materia medica commonly used were amber, turpentine, myrrh and cedar sap.

**Graeco-Roman Medicine**

While there are many theories and accounts of hearing and tinnitus in the Greek writings, remarkably little has survived in the way of ideas on the treatment of tinnitus. Concepts based on the humours were introduced by Empedocles (504-433 B.C.) and appear to have been applied to the treatment of tinnitus. This is reflected by the statement in the Hippocratic Corpus (Regimen in acute disease, Appendix. Section 23—see Littre. 1840) warning against the purging of patients suffering from tinnitus. It was argued that purging in itself was dangerous, is of no benefit and may prevent a spontaneous remission of the symptoms.

Although it was originally thought that all these writings were the work of Hippocrates (460–377 B.C.) himself, it is now generally accepted (e.g. Lloyd, 1978) that the sixty or so treatises were the product of the school of Cos between 430 and 330 B.C. and it is uncertain which might have been written by Hippocrates personally.

Several authors (e.g. Vernon, 1981; Hazell, 1979) have attributed to Hippocrates the earliest statement on masking: ‘Why is it that buzzing in the ears ceases if one makes a sound? Is it because a greater sound drives out the less?’. In fact this statement is to be found in the English translation of Aristotle’s (384–322 B.C.) Problemata,
More definite early treatments of tinnitus are to be found in the compendium ‘De Medicina’ published by Celsus in Rome about 30 A.D. (Spencer, 1938). Book VI Section 7 is devoted to ear disease and three paragraphs of this specifically concern tinnitus. In these he defines the treatment according to the cause of the condition. Thus, if the tinnitus stems from a cold (?otitis media), ‘the ear should be cleaned and the breath held until some humour froths out from it’. If on the other hand it arises from disease in the head (?Menière’s disorder), ‘exercise, rubbing, affusion and gargling should be carried out.’ The patient should diet, and various drugs should be inserted into the external meatus. These include a number of alternatives, such as radish juice with oil of roses and the juice of a wild cucumber root, castor, laurel oil, vinegar, honey, etc., making a salve with the last.

Tinnitus due to other causes was regarded as potentially sinister although the pharmacological treatment was somewhat similar but including in this case two popular standbys, the juice of bitter almonds and myrrh. Some dieting was also recommended and the patient was advised to abstain from wine. This was certainly one of the earliest instances in which patients were recommended to reduce their alcohol consumption as a means of relieving tinnitus.

Pliny the Elder (23–79 A.D.), in his extensive Natural History Four (e.g. Bostock and Riley, 1856), wrote in Book 28, Chapter 48; Book 29, Chapter 39; and Book 33, Chapter 25 on the treatment of disease of the ears. He did not specify tinnitus but referred in more general terms to diseases or pains of the ears. In this he advocated far more bizarre treatments, such as the use of earthworms boiled in goose grease and inserted into the meat, woodlice, ox gall, foxes fat, boar semen, asses dung, woman’s milk, and foam from a horse’s mouth. Unfortunately these esoteric treatments were to remain in common use in medicine until well after the publication of the London Pharmacopoea (1618). He did, however, also advocate other materials which recur throughout historical times in the treatment of ear disease, such as the juice of leeks, rose oil, onion juice and honey.

The Middle Ages

The Greek tradition was then passed on via the Byzantines, the Islamic Physicians, the Jews and back to Europe via the School of Salerno. The serious writers among these attempted more of a synthesis of the humoral theories, although most of the basic pharmacopoeas remained unchanged. They modified their treatment of tinnitus according to their interpretation of the particular disbalance of the humours causing it in any specific case. They were also influenced to some degree by the traditional medicine (usually herbal) of the countries in which they lived, be it Mesopotamia, the Germanic lands or the Celtic countries.

Paul of Aegina (625–690 AD) was the last important figure to emerge from the Alexandrian tradition of Greek medicine. In Book Three Section 23 he divided tinnitus into three categories: that due to fevers; chronic noises produced by thick and viscid humours; and chronic hissing sounds (e.g. Adams, 1844). That due to fevers he advised best left alone unless it persisted long after the disease itself had cleared up, in which...
case one of a number of mixtures including either rose oil or vinegar should be introduced into the meatus.

Chronic noises of gradual onset caused by ‘thick viscid humours’ were treated by syringing with vinegar, nitre and honey or a similar but more complex mixture. Hissing sounds and other chronic noises were treated with euphorbium in oil of privet, and when there was increased sensibility (vide also Galen) seeds of hemlock were used.

Avicenna or Ibn-Sina (980–1036) was one of the leading Islamic physicians, and like many of his contemporaries collected and synthesised much of the earlier work adding to it at the same time. His ‘Canon’ (e.g. Anon, 1964) became one of the major medical textbooks through the medieval period. In this he recognised at least five types of tinnitus, including what appears to be the earliest reference to ototoxic tinnitus ‘... sometimes comes because of certain medicines which cause a retention of the humours and winds in certain parts of the brain’. The others for which he describes treatment are:

1. Caused by viscous humours stopping up the ear—treated by a bath, vomiting, purging of the humours, comforting of the brain with myrrh and administration of the oil of almonds to the ears.
2. Caused by fevers—treated by clearing the fever.
3. Caused by excitement of the senses—treated by the use of stupefying medicines, opiates mixed with oils to the ears, henbane and castor.
4. Caused by cold viscous humours—treated with medicine based on hellebore, saffron and nitre.

A definite pattern to treatment thus seems to be emerging which was continued through medieval and later times.

Thus, nearer to home, Gilbertus Anglicus (1180–1250) wrote his ‘Compendium’ about 1240, the earliest complete English medical text and included a section on ‘Ringing in the ears’ (Getz, 1981). This was originally written in Latin but subsequently translated into Middle English. Gilbertus describes tinnitus as coming from: (1) ‘A great windy matter moving up and down, and for which there is no treatment unless it be due to a viscous corrupt humour in which case the patient should be purged, the purging depending on whether it is due to a hot or cold humour. In the former purge the cholere in the latter the melancholy.’ A drug often used to fulfil both these functions was Mirobalan indi derived from the ripe fruit of Temmalia Citrina from India (Getz, 1981). ‘He should then be made to sneeze and treated with bean stalks with anise or cumin seeds mixed with them’; (2) Tinnitus due to heat—put oil of bitter almonds in his ears. (3) Tinnitus coming from cold should be treated by (?ear drops) of myrrh and castor. Juice of radish, juice of leek, oil of roses, or woman’s milk are alternatives. (4) Tinnitus related to feebleness of the ears (?presbyacusis) should be treated with juice of wormwood mixed with warm vinegar and inserted into the ears.

Gilbertus finished by warning against the use of sharp and biting medicines being administered to the ears.

This recurrence of similar medicines has been analysed in an ongoing study of classical and medieval manuscripts (Opsomer-Halleux, 1981), although she does not list drugs defined specifically for tinnitus, instead grouping them together with those used for ear conditions. Indeed she argues that generally the same medications were applied for hearing loss, tinnitus, otalgia, and other conditions. She divides the drugs into those to act on the brain, including vinegar gargles to clear the head, warm topical infusions inserted through a quill, a pierced horn, or a curved pipe; but does not, surprisingly, refer to treatments in which the wool was soaked in the drug and inserted into the ears.

Guy de Chauliac (1300–1370) was one of the most celebrated French surgeons and writers of the fourteenth century. For tinnitus and hearing loss caused by cold humours he advocated the use of fumigation of the ears by urine of ox with vinegar and myrrh, being led to the ear by a pipe linked to the narrow mouthed pot in which it was being
heated (Ogden, 1971). He also advocated a 'subfumigation' using a variety of herbs in white wine. Politzer (1907) referred to manuscript 15106 of the Viennese Court which described a similar approach.

Coming back to the treatment of tinnitus with other noises, Guy de Chauliac referred to the fact that Alisaundre ('Alexander of Tralles) reported that patients with tinnitus were 'comforted by walking in various places', and that Avicenna reported they might find relief by 'yelling and being scared by a screaming voice'.

The final medieval contribution comes from the physicians of Myddfai in Wales whose manuscripts date from the fourteenth century (Davies and Owen, 1975). In the 'Llyfr Meddyginiaeth' manuscript, a treatment for pain and noise in the ear is as follows:

Cymmer dorth a fara gennith twyddo yn fwrn, a'i hollti'n ddau hanner. a dod wrth y ddau glust mor dwym ag y gellir ei oddef, a rhwym a chwysu felly, ag yn wir iach a fyddi tryw Dduw' ('Take a loaf of wheaten bread hot from the oven, divide in two and apply to both ears as hot as can be borne, bind and thus produce perspiration, and by the help of god you will be cured.' (Pughe and Williams ab Ithel, 1861)

Renaissance to the end of the eighteenth century

Although this period represents a major advance in the knowledge of the anatomy of the ear, and also of certain aspects of its physiology, the treatment of hearing loss and in particular of tinnitus progressed little. Paracelsus (1491–1541), who symbolized his break with the past by publicly burning the works of Galen and Avicenna, probably had the most revolutionary attitude towards the treatment of disease, rejecting polypharmacy, advocating simples, and introducing mineral based drugs. However, he also advocated the doctrine of signatures, suggesting that a material used in the treatment of a condition should have some physical appearance relating to that condition. Thus for the treatment of ear disease, he recommended the use of cyclamen which has ear-shaped leaves (Thornton, 1980). For tinnitus his treatment was one guaranteed to scare the patient into good health, with repeated scarification of the auricle, cupping behind the ears, and venesection under the tongue (Politzer, 1907).

The lack of pharmacological progress in the treatment of ear disease in general, and tinnitus in particular, is reflected in the various writings which repeat medieval and earlier recipes. Reports of such treatments are found also in folklore (Rolleston, 1942; Wright, 1925) and even in Culpeper's Herbal, first published in 1649 and reprinted to the present day. In this last the four cures for tinnitus are:

(1) 'Juice of beetroot put into the nostrils purgeth the head, helpeth the noise in the ears'.

(2) 'The oil of henbane seeds is good for deafness, noise in the ears, being dropped there: the juice of the herb or root acts the same'.

(3) 'The hot vapours of a decoction of hyssop taken by a funnel in at the ears eases the inflammations and singing noise of them'.

(4) 'The juice of wild marjoram dropped into the ears helps deafness, pain and noise in them', (Anon, 1978).

It is thus perhaps not surprising that the most eminent writer on ears and ear disease over this period, du Verney (1648–1730) in his 'Traite de l'organ de l'ouie' (1683), while devoting ten pages to tinnitus, refers only to treatment of the underlying cause, not to the treatment of the symptoms per se.

Other approaches in this period entailed the advocacy of surgery in the treatment of tinnitus, its treatment with loud noises, the
application of positive and negative pressure, and finally the use of electricity. The rationale behind the use of surgery stems from one of the concepts of the mechanism of tinnitus which dates back to the Greek writers. This is the idea that it may be caused by wind becoming entrapped in the ear and then going round and round inside it. Thus the French author Jean Riolan the younger (1580–1657) argued that this could be treated by trepanation of the mastoid process to enable it to escape and so relieve the tinnitus (Politzer, 1907).

Johan Jakob Webfer (1620–1695), a Swiss physician, described the separation of objective and subjective tinnitus by the occlusion of the external meatus with a finger or drinking cup. He then went on to the treatment of tinnitus with loud noises such as banging stones together (Webfer, 1727), this being along the lines of the approach advocated by Guy de Chauliac and possibly dating back to Avicenna. Webfer’s argument was that this removed from the ear the ‘serous fluid’ causing the tinnitus.

The German Lorenz Heister (1683–1758) referred to the use of a silver tube some 23 cms long which was introduced into the external meatus and used to create a negative pressure on the tympanic membrane (Politzer, 1907). Politzer, incidentally, seemed to have approved of this approach and wondered why it had not come to be more extensively used, and mentioned also a certain Simeon to whom Nicola Nicole (1347–1430) had referred in his writings, who had used a similar technique for the relief of hearing loss.

Once electricity had been discovered in the eighteenth century, it was used in an attempt to treat virtually everything. Its first application to the treatment of tinnitus was apparently described by Georg Daniel Wibel in 1768 in which he reported considerable success in the treatment of tinnitus and hearing loss with electricity, without describing details of the technique used.

Despite this, Erasmus Darwin (1731–1802), one of the most famous English physicians of the time, made no reference to it in his Zoonomia (Darwin, 1796). His writing on tinnitus (Class iv.2.1.15) dealt with the symptom only when it accompanied vertigo, and he stuck to a very conservative approach involving the administration to the external ear of either ether, a solution of opium in wine, or simply salt and water.

The early nineteenth century

Two of the most interesting writers of the early nineteenth century came from unorthodox backgrounds: one, Itard, in Paris, became a straight medical practitioner developing many audiological investigations (see Stephens, 1981); the other, Curtis, in London, remained on the fringe even though he founded the first ear hospital in London, the Royal Ear Hospital.

Jean Marie Gaspard Itard (1775–1838) is popularly known for his attempts to educate ‘l’Enfant Sauvage’ (Lanc, 1976) but as physician to the Institute for the Deaf and Dumb in Paris he performed much original work and may in many ways be regarded as the father of Audiological Medicine. His main publication was his ‘Traite des Maladies de l’oreille’ (Itard, 1821) and in the second volume devotes a chapter to tinnitus and its treatment.

Recognizing that most tinnitus is associated with hearing loss he defined a test involving pressure on the carotid artery to differentiate between tinnitus causing hearing loss and tinnitus secondary to hearing loss. His rationale was that, if both the tinnitus and the hearing loss disappeared, the latter was caused by the tinnitus. If the hearing loss was the primary condition, he argued that treatment should be orientated towards this; if tinnitus was primary, efforts should be concentrated on that.

He classified tinnitus into:

1. ‘True tinnitus’—caused by accentuation of physiological noises, usually vascular, and often related to an obstruction of the auditory passages.
2. ‘False tinnitus’—not related to normal physiological noises. This was subdivided into:
   i. ‘Idiopathic’—not related to other
symptoms, and often caused by noise exposure.

(ii) ‘Symptomatic’—related to other symptoms and found in office workers, hypochondriacs, hysterical women, those with worms or stomach upsets, menorrhagia, etc. Spontaneous remissions and variations of its nature occurred commonly in the case of ‘false’ tinnitus.

(3) ‘Fantastic tinnitus’—auditory hallucinations related to psychological disorders in which the treatment was that of the underlying disorder.

The remedy for ‘True tinnitus’, if from an obstructive nature was to treat the obstruction using traditional approaches. If due to vascular anomaly or ‘excessive blood to the head’, the technique he followed was basically one of reducing such excess with irritant footbaths, and by bleeding either by incising the saphenous vein or applying leeches to the legs. If this proved unsuccessful he would apply the leeches to the neck or around the ear, and sometimes even incise the external jugular vein. Such bleeding should be accompanied by cold showers to the head.

‘False tinnitus’ should be treated with anti-spasmodics, either general or local. Examples of the latter were either directed to the external meatus, friction massage of the head, or warm applications to the ears.

Itard admitted that often treatment failed and that the role of the physician was then to make the tinnitus less unbearable, especially from the point of view of sleep disturbance and ongoing worry. He argued that a technique which rarely failed was to cover the internal sound by an external one and that such a sound should be matched as far as possible to the tinnitus.

Thus, tinnitus like the sound of a wind could be masked by a roaring fire; a whistling tinnitus could be relieved by the sound of burning damp wood; tinnitus like bells could be relieved by water falling from a vase, with a hole in its base, down into a copper bowl; and to mask tinnitus like the sound of wheels, he advocated the use of a clockwork motor. In one severe case of intractable tinnitus the patient was able to obtain sustained relief only by going to live in a water mill.

John Harrison Curtis (1178–1860) was less of a systematist and innovator than Itard and many of his treatments involving Setons, Blisters, Bleeding and Purging would not have been out of place in the medieval period. In his writings (e.g. Curtis, 1831) he did, however, recognize the psychological aspects of tinnitus and often advocated psychological cures involving rest, spa treatment and the like. He also recognized the importance of early treatment of the tinnitus, arguing that the long-term psychological consequences could be a change of the sound into auditory hallucinations.

The mid and late nineteenth century

The significance of Itard’s work, in particular, was that it represented the new approach to the treatment of disease from the Parisian School, being based on his findings and clinical observations. Obviously some relics from the early humoral schools were bound to remain.

William Wilde (1815–1876) one of the doyens of Otology in the mid nineteenth century, advocated the use of leeches and cupping in his famous textbook of 1853.

The middle and latter part of the nineteenth century saw general changes in medicine based on advancing technology, the recognition of the infectious nature of much disease, and the increasing chemical sophistication in the isolation and synthesis of pharmacologically active substances. The work of Pasteur, Koch and their associates had little immediate effect on the treatment of tinnitus, effective antibacterial drugs being developed only well into the twentieth century, although aseptic and antiseptic surgery opened certain venues. Technological advances and the development of a more sophisticated pharmacopoea had qualitative effects on the techniques used in the treatment of tinnitus, but no significant breakthrough was made,

†It is interesting to note that this approach of applying leeches around the external ear to cure tinnitus is still used by non-orthodox practitioners in Iran (Viziae—personal communication).
the treatment following essentially along the
basic techniques developed earlier, albeit
applied in a more sophisticated way.

Thus for example, electrical stimulation of
the ear to suppress tinnitus was put on a
more rational footing by the work of Brenner
(1868), who showed that anodal stimulation
was essential for effective suppression of
tinnitus. The technique, discussed at some
length by McNaughton-Jones (1891),
involved an active electrode on a sponge
applied to the external meatus with the
reference electrode a plate on the neck. He
himself claimed to be disappointed with the
results of the procedure and felt it to be of
use only in weakness of the innervation of the
tubal and tympani muscles. He devised a
sophisticated stimulator to apply current
directly to the former via a Eustachian
catheter.

Acoustical stimulation using controlled
sources of loud sounds to suppress tinnitus
as advocated earlier by Guy de Chauliac and
others were presented using a telephone
transducer by Wilson (1893) but do not
appear to have attracted much support else-
where. The use of masking advocated by
Itard appears to have fallen in abeyance until
the end of the century, when it was picked up
by Spalding in 1903 and put on a more
technological footing by Jones and
Knundsen with their harmonic generator in
1928.

Surgical approaches were limited until
Lister’s development of germ-free surgery
became widely accepted. Prior to that time
the morbidity and mortality rates from any
serious surgical intervention were appalling.
Such surgery was obviously facilitated by the
widespread introduction of anaesthesia in the
middle of the century. However, any nine-
teenth-century surgery generally involved
only paracentesis (Wilde, 1853) or ligation of
the blood vessels considered to be implicated
(posterior occipital artery—Reyburn, 1879;
post-auricular vessels—Bellows, 1896), all of
which only had temporary effects on the
tinnitus. Incudectomy was performed in
1894 to relieve three chronic cases (Burnett,
1894) but the VIIIth nerve was not sec-
tioned until 1912 (Dench, 1912) and three
years later an unsuccessful labyrinthectomy
was performed in an attempt to help a patient
(Duel, 1915).

Less traumatic approaches, picking up
techniques of compression of the vertebral
and mastoid arteries, were reported by a
number of authors. Massage was found to
offer relief in a number of cases and evoked
the comment from McNaughton-Jones
(1891): ‘I do not pretend to explain how it
acts but it has in some cases a decidedly
beneficial effect.’

Pharmacologically, people appear to have
been as confused as they are at present.
McNaughton Jones (1891) listed (p. 24)
many drugs including nitroglycerine, ether,
quinine, amyl nitrate, pilocarpine, and hydro-
bromic acid as ‘therapeutical causes of tinni-
tus’. Elsewhere in his publication, together
with those of many of his contemporaries, he
advocated the use of these same in the treat-
ment of the condition. Recently Brown et al.
(1981), in their chapter on the Ciba Sym-
posium on Tinnitus, list drugs which may
induce tinnitus, many of which are listed else-
where in the same publication as offering
relief from the condition.

Conclusions

From the foregoing account which, with a
few exceptions, has deliberately avoided any
consideration of twentieth-century develop-
ments, it may be seen that progress in the
treatment of tinnitus has been painfully slow
and that none of the treatments has ever been
evaluated in what might be accepted as a
scientific manner. Much of this is also true of
the past eighty years in which the only treat-
ment to have been rigorously demonstrated
as being better than placebo has been the
administration of lignocaine. We are thus still
left essentially with the treatment of the
underlying cause of the condition or the relief
of the symptoms. Itard’s statement (1821)
that treatment of tinnitus is generally un-
successful and in most cases the physicians
orientation must be towards the relief of dis-
turbing symptoms is still largely true.

Many of these symptoms are of a psycho-
logical nature, (excess worry, sleep distur-
bance, depression, tension, etc.), and although considerations of the psychological aspects of the treatment of tinnitus date back to the Mesopotamians, and many subsequently have paid lip service to it, no serious medico-psychological consideration of the matter has been made until recent years (e.g. Fowler, 1948). This has led to the development of a large number of 'fringe' treatments over recent years. Some of these have looked to traditional Chinese medicine such as acupuncture, Moxibustion and their more recent derivatives of Acupressure and Electrical Acupuncture. Here again Moxibustion was advocated by Sun Szü-Mo (581–682 A.D.) in the T’ang dynasty (Huang, 1974) but there have been very few controlled evaluations of these approaches. An exception to this is the recent publication of Hansen, Hansen and Bentzen (1982) which, however, gave somewhat ambivalent results.

More orthodox approaches to symptom relief have come in recent years from the use of hearing aids and tinnitus maskers, but of these only the use of hearing aids entails an essentially new approach dependent on electronic technology.

Any approach to tinnitus in the future must entail a combination of preventive audiology, a continuing search for pharmacological agents active against tinnitus and symptomatic relief. A more coherent approach to the psychological aspects of the patient’s symptoms has much to offer in this respect.

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