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List of Abbreviations

ABG	Air Bone Gap
Al2O3	Aluminum oxide ceramic
CCHMSC	Charing Cross Hospital Medical School collection
CHL	Conductive Hearing Loss
COM	Chronic Otitis Media
CR	Crown-rump
CT	Computerized Tomography
CWD	Canal wall-down
dB	Decible
DCB	Double Cartilage Block
EAC	External Auditory Canal
ETD	Eustachian Tube Dysfunction
F	Force
FTTP	Fisch titanium total prosthesis
HA	Hydroxylapatite
HAC	Hydroxylappatite Cement
HAPEX	HA reinforced polyethylene composite
HDPS	High-Density Polyethylene Sponge
HL	Hearing Level
ICW	Intact canal wall
IL	Interleukin
IS	Incudostapedial
kHz	kilo Hertz
MASH	Malleus Assembly Stapes Head
MERI	Middle Ear Risk Index
MMP	Matrix metalloproteinases
MRI	Magnetic Resonance Imaging
NaOH	Sodium hydroxyl
OCR	Ossicular Chain Reconstructure
POP	Partial Ossicular Prosthesis
PORP	Partial Ossicuular Replacement Prosthesis
PTA	Pure Tone Average
SD	Standard Deviation
SPITE	S-surgical, P-prosthetic, I-infection, T tissue, E-Eustachian tube
SPL	Sound Pressure Level
TASH	Tympanic Assembly Stapes Head
TM	Tympanic Membrane
TOP	Total Ossicular Prosthesis

TORP	Total Ossicuular Replacement Prosthesis
TTPs	Total titanium prostheses
WHO	World Health Organization

Abstract

Ossiculoplasty can be defined as ossicular chain reconstruction (OCR) which has been eroded or disrupted by using adhesive substances or prostheses. The two main categories of prosthetic materials are: (1) biologic (autografts and homografts) and (2) synthetic (alloplasts or allografts). Autograft materials include cortical bone chips, native ossicles (usually the incus), and cartilage (from tragus or concha). Alloplastic prostheses are made of numerous artificial substances, including Teflon, polyethylene, metal wire, polycel, carbon, bioactive glass, Ceravital, and aluminum oxide ceramic .

Most current prostheses are made of titanium, plastipore, and hydroxylapatite (singly or in combination), with dense HA the most commonly used material. Ossiculoplasty is an effective surgical option for reconstruction of the diseased middle ear. It can very effectively treat conductive hearing loss.