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PUBLISHED PAPER'S TITLE : INTACT BRIDGE
MASTOIDECTOMY, A VERSATILE SINGLE STAGE SURGICAL
METHOD FOR CHRONIC SUPPURATIVE OTITIS MEDIA

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Research Paper

INTACT BRIDGE MASTOIDECTOMY, A VERSATILE SINGLE STAGE SURGICAL METHOD FOR CHRONIC SUPPURATIVE OTITIS MEDIA

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Declaration

The Declaration of the authors for publication of Research Paper in Asian Journal of Modern and Ayurvedic Medical Science (ISSN 2279-0772) : MK Gupta*,MKAgarwal*,Ganesh Kumar** the authors of the research paper entitled Intact bridge mastoidectomy, a versatile single stage surgical method for chronic suppurative otitis media declare that , we take the responsibility of the content and material of my paper as we ourself have written it and also have read the manuscript of our paper carefully. Also, we hereby give our consent to publish our paper in ajmams , This research paper is our original work and no part of it or it's similar version is published or has been sent for publication anywhere else. we authorise the Editorial Board of the Journal to modify and edit the manuscript. we also give our consent to the publisher of ajmams to own the copyright of our research paper.

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Abstract

Objective - To evaluate the efficacy of Intact bridge mastoidectomy for chronic ear diseases and compare it with canal wall down technique and intact canal wall technique. **Material and method**—A prospective and comparative study was done on 120 patients, divided into three equal groups .Patients of CSOM with granulation, cholesteatoma and cholesterol granuloma were taken for study.40 patients were operated by IBM technique,40 patients by CWD technique and 40 patients by ICW technique. Results were compared in terms of air bone gap improvement and success rate. **Results**—In our study, in terms of outcome,air bone gap improvement by IBM technique was better than CWD technique ,but was comparable to ICW technique. Incidence of recurrence of disease was less than that of ICW technique but was almost equal to CWD technique. **Conclusion**—IBM technique is a very good technique in comparision to CWD and ICW technique,as it results in better ABG improvement and recurrence is less.

Keywords---IBM(Intact bridge mastoidectomy),CWD(Canal wall down), ICW(Intact canal wall)



Introduction

Eradication of disease and preservation of function are two of the most important goals in surgery for chronic problems of ear. Over the past decades, various surgical approaches have been attempted to achieve these objectives. Closed cavity tympanomastoidectomy described by Jansen (1968) has better preservation of function, but traditionally there is high failure rate in eradicating the disease, and it requires two or more staged approaches. Open cavity technique is relatively successful in eradicating the disease, but it has drawback of cavity problems and poor hearing results. Intact bridge mastoidectomy (IBM) combines the benefit of better eradication of disease and better hearing results seen with closed cavity technique. These considerations led Michael M Paparella and Jung (1983) to develop IBM technique, which combines salient features of both open and closed techniques. MD Hamid Sajjadi (1996) further improvised this IBM technique. This procedure is indicated for treatment of chronic otitis media and chronic mastoiditis with intractable pathological tissues such as cholesteatoma, granulation tissue and cholesterol granuloma.

We have adopted this technique of IBM in pts with cholesteatoma and cholesterol granuloma.

Material and methods

This prospective and comparative study was done in Government medical college and super facility hospital, Azamgarh, UP, on 120 pts suffering from CSOM, cholesteatoma and cholesterol granuloma. Pts of 10 to 50 yrs age and both genders were included in this study.

Three groups were formed. 40 pts were operated by closed technique, 40 pts were operated by open technique and 40 pts were operated by IBM technique. Preoperative investigations and evaluations were done including pure tone audiometry. CT Scan of every patient's temporal bone was done to access the extent of disease.

All the pts were operated under LA with sedation. For IBM technique, pts were taken to operation theater, painting and draping done. LA was achieved by injecting 2% xylocaine with adrenaline. Postural incision was given. Mastoid cortex exposed. Temporalis fascia was harvested. Mastoidectomy was done. Bridge was preserved and sculptured depending upon diseased tissue. Atticotomy may be done as needed, which may displace the bridge posteriorly. Bridge and continuous facial buttress should remain as high enough to increase the mesotympanic space adequately. Aditus may be enlarged for adequate removal of disease. Intact ossicular chain was not dismantled. With the help of otoendoscope, disease was removed thoroughly from the medial as well as lateral surface of ossicular chain. Reconstruction of middle ear was done. Aditus was closed by periosteum harvested from mastoid cortex. Meatoplasty was done. Canal was packed with medicated gel foam. Other two groups of pts were operated by standard open cavity technique and closed technique respectively. After postoperative monitoring, patients were discharged next day. Patients were reviewed after one week for suture removal. Further followup was done after 1, 3 and 6 months. Pts were observed for recurrence of disease and postoperative hearing improvement.



Discussion

In our study, among the patients operated by IBM technique, 50% were male and 50% were female. Among the patients operated by ICW technique, 70% were male and 30% were female and among patients operated by CWD technique, 55% were male and 45% were female. (figure no -1)

Among patients operated by IBM technique, 75% were from urban and 25% were from rural population. In the patients operated by ICW tech, this distribution was 62.5% urban and 37.5% rural. In the patients operated by CWD technique, this urban rural distribution was 75% and 25% respectively. (figure no-2)

As for as ABG improvement was concerned, in IBM tech, 0-10 db improvement was seen in 25% patients, 10-20 db improvement was seen in 62.5% patients and 20-30 db improvement was seen in 12.5% cases.

Among patients operated by ICW tech, 0-10 db ABG improvement was seen in 37.5% cases, 10-20 db improvement was seen in 50% pts and 20-30 db improvement was seen in 12.5% cases.

Among patients operated by CWD tech, 0-10 db improvement was seen in 25% cases, 10-20 db improvement was seen in 12.5% cases and no improvement was seen in 62.5% cases. (table no-1)

Incidence of recurrence of disease was 5% among patients operated by IBM tech, 2.5% in CWD Tech and 17.5% in IBM tech. (figure no- 4)

In the patients who were operated by CWD method are not happy with their

hearing results. In this era of modernisation, even the poorest patients uses mobile phone, they are very much concerned with hearing improvement. Therefore, it is not feasible to dismantle the intact chain. In ICW procedure, recurrence of disease is common and it also requires staging. In view of above scenerio, Michael M paparella and Jung (1983) developed the IBM technique. Hamid Sajjadi (1996) further improvised this technique. In our study, we found incidence of recurrence higher (17.5%) in patients operated by ICW technique. In patients operated by CWD technique, recurrence was 2.5% and in patients operated by IBM technique, it was 5%. ABG improvement of 10-20 db was seen in 62.5% cases, in 50% cases and in 12.5% cases in patients operated by the techniques of IBM, ICW and CWD respectively. It shows ABG improvement in IBM technique comparable to ICW technique, and better than in CWD technique.

Success rate in our study was comparable to the earlier studies done by Paparella and Jung (1983).

Conclusion

Among all the three techniques, we found IBM technique useful in improving the hearing. Recurrence of disease is also less in IBM technique. Hence we advocate IBM technique for csom with choleseatoma and cholesterol granuloma.

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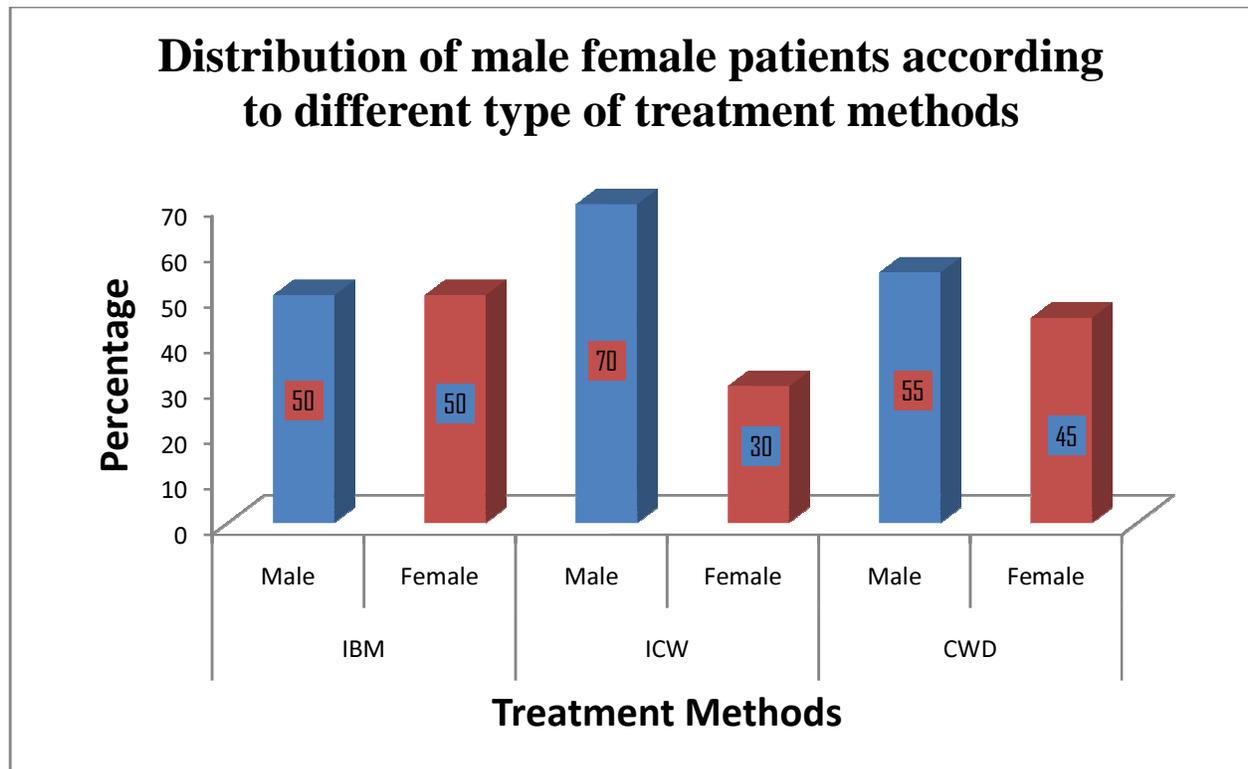


Figure no -1 sex ratio

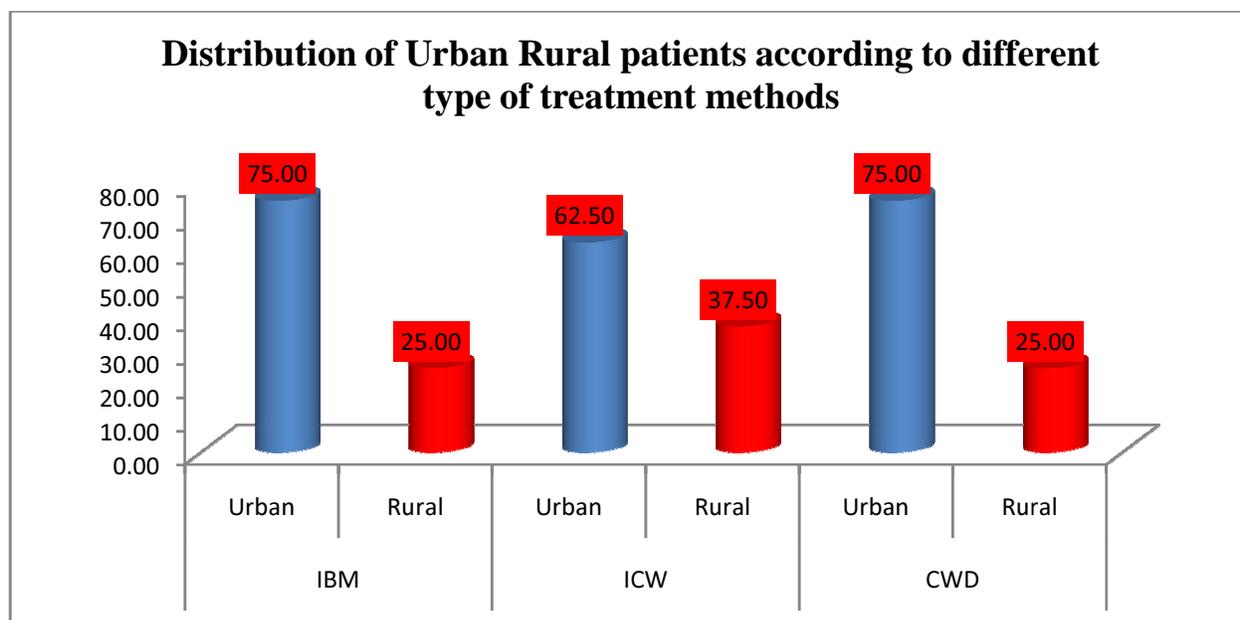


Figure no -2 urban rural population distribution

Distribution of ABG Improvement on the basis of different types of Surgery			
Types Of Surgery	ABG Improvement	No. Of Patients	Percentage
IBM	0-10	10	25.00
	10-20	25	62.50
	20-30	5	12.50
ICW	0-10	15	37.5
	10-20	20	50.00
	20-30	5	12.50
CWD	0-10	10	25.00
	10-20	5	12.50
	20-30	0	0.00
	No Improvement	25	62.50

Table no -1 ABG improvement in different groups.



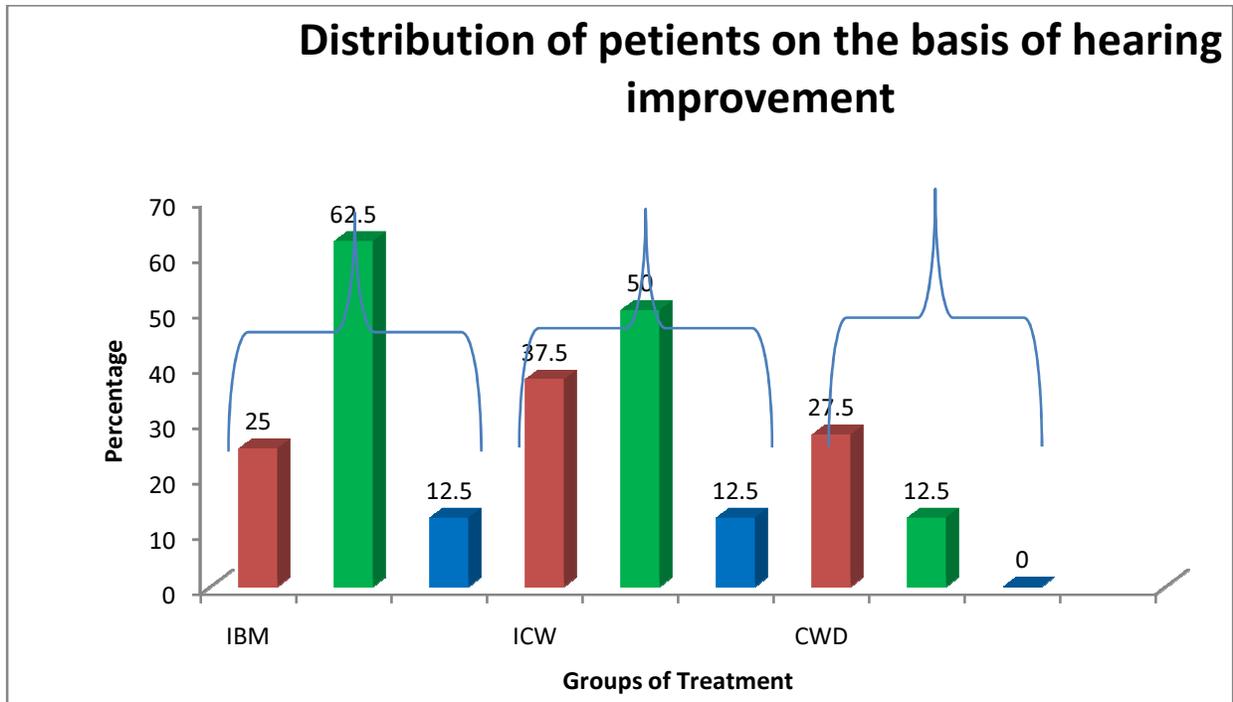


Figure no-3 ABG improvement in different groups.

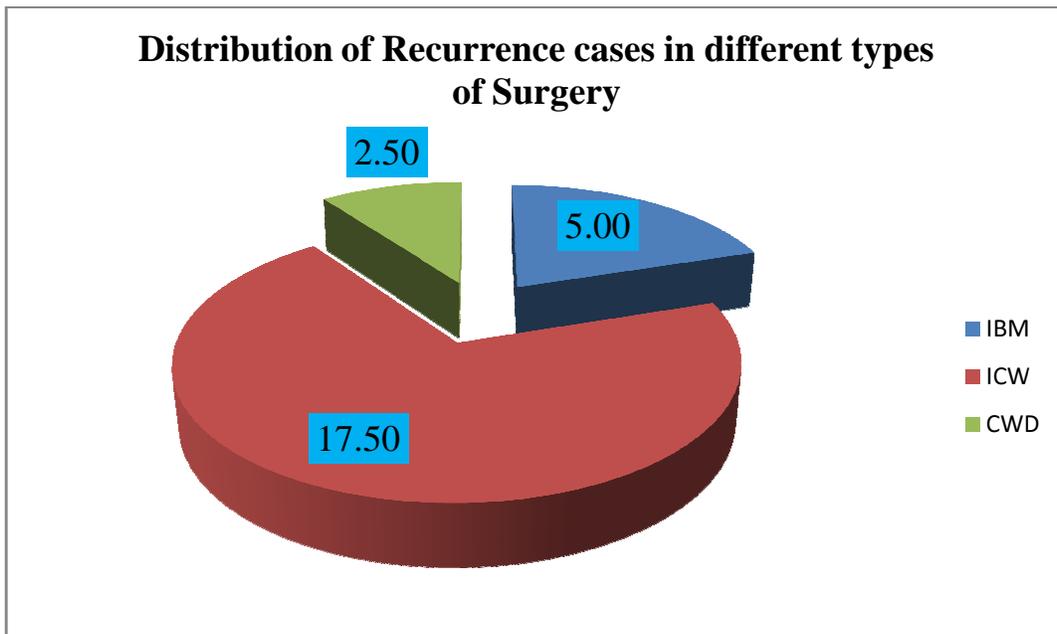


Figure no -4 Recurrence of disease in different groups.

