

Cost Effective Intraoperative Mri for Cranial and Spinal Cases Using Pre-Existing Three Side Open Mri-Adjacent to Operation Theater = Since-2005

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Abstract : Aims/Background: The existing Intraoperative-MRI(IMRI) of developed countries is too costly to be utilized in any developing country. We have used the preexisting 3-side open 0.2-tesla MRI for IMRI in India so that the maximum benefit of the goal of IMRI is attained with cost effective state of the art surgeries. Material/Methods: We have operated 36-cases since 13thNov2005 via IMRI to till date. The table of MRI is used as an operating table which can be taken to the P3 level and as and when we require MRI to be done then the table can slide to P1 level so that the intraoperative monitoring can be done. The oxygen/nitrous tubes were taken out from vent made in the wall of the MRI room to outside. The small handy Boyel's trolley was taken inside the MRI room with a small monitor. Anesthesia is been given in the MRI room itself. Usual skin markings were given with the help of scout MRI fields so the preciseness is increased. Craniotomy flap raised or the laminectomy and the dura opened in the similar fashion by same instruments as for the non IMRI case. Now corticectomy is planned after the T1 contrast image to localize and minimize the cortical resection. Staged and multiple P3 to P1 position and vice versa is planned respectively so that the resection is optimized to around 0.5 mm for radiotherapy. Immediate preclosure hematoma and edemas can be differentiated and cared for it. Results: Same MRI images as compared to highly expensive MRI of western world are achieved. Conclusion: 0.2 tesla Intraoperative MRI can be used for operative work for cranial and spinal cases easily with highly cost effectiveness.

Keywords : intraoperative MRI, 0.2 tesla intraoperative MRI, cost effective intraoperative MRI, medical and health sciences

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