

Stroke imaging

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STROKE IMAGING The use of magnetic resonance imaging is increasingly getting common and used by the physician to determine the deteriorating affects occurring after strokes. Such image gives the initial idea about the damage that has been caused to the tissues. Advances and further researches are still going in the field of the MRI to improve the quality of the images by increasing magnetic strength. The question about MRI's significance is still being debated by Max P. Rosen, MD, and MPH, a radiologist at Beth Israel Deaconess Medical Center in Boston and his colleagues. The use of MRI for determining the outcomes of stroke is quite useful but this is just a conclusion sorted out for its better use but basically MRI's were not meant for this purpose. The data provided by such scans is incomplete and calls for further investigation because admitting diagnosis, duration and severity of the disease symptoms and initial therapy applied all are the significant factors which are neglected and these are the key information points to be considered while determining the continuation therapy for the patients as well as proper use of the technique also requires these basic information, says Robert DeLaPaz, a professor of radiology and director of neuroradiology at Columbia University Medical Center in New York. When a patient arrives at hospital after stroke Physicians have to call for immediate noncontrast CT scan to look for the hemorrhage and the procedure should not be delayed by any imaging. If no hemorrhage is present then he can be treated for thrombolytic ischemia. Its important to completely identify the infract zone which is effected by the stroke for this purpose CT combined with MRI is suggested to get the better picture of the situation by identifying the infract using Diffusion Weight Images (DWI) and shows its mismatch with the perfusion weight images (PWI) in the

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surrounding of ischemic penumbra. The treatment for this mismatched zone is quite difficult for initial 3 to 4.5 hours because it's under perfusion but not dead and retrieving it back to life requires much complex imaging. Plus the study does not provide any comparison between the patients with minor or large infarcts of major brain regions for they differ greatly in therapy and imaging requirements and length of hospitalization. But the use of MRI can be potentially significant if the patient is a late comer after the stroke and if it is to determine whether the tissues are still treatable or the infarction is already at end stage and nothing else can be done to salvage it, it is because of the same reason the use of MRI is greatly advancing in U. S hospitals but still better results can not be interlinked with the use of MRI without better patient data. Use of MRI is a lot lower in Canadian hospitals as compared to U. S hospitals so the data was collected to see whether the results indicate any difference in survival rate, but it required initial time of arrival of patients and first signs of stroke so the patients diagnosed with stroke were taken and compared the data of their stay at the hospital or mortality rate at the hospitals Beth Israel Deaconess in Boston and The Ottawa Hospital in Ontario, Canada. , By Levy, a professor of urban economics at the Massachusetts Institute of Technology the outcomes were studied and further analysis is in demand in this aspect. However, it is difficult to draw conclusions on the basis of availability of the imaging equipment that what studies were ordered and when. But the question of capacity is worth interrogating because it is the cause of increase in cost of the affective Health Care in America. One fifth of the payments of the physician of the Medicare are due to increase use of imaging technique and it has doubled since 2000 to 2006. Two hospitals were compared; one in <https://assignbuster.com/stroke-imaging/>

U. S and one in Canada, in 2005, Canada had 5.5 scanners per 1 million populations while U. S had 26.6 scanners per 1 million population which is almost 5 times as many. Analysis reported 12,964 imaging performed on 2,677 patients, 4,443 at U. S hospital (on 918 patients) and 8,521 at Canadian hospital (on 1,759 patients), all U. S patients received at least one imaging while 1 out of every 12 in Canada had imaging. 21% of MRI of all imaging is occurring at Boston vs. 9.11% in Canada. Also as age increases MRI studies per admission decrease. However, mortality rates at U. S hospitals (7.1%) is lower than the 11.3% in Canadian Hospitals. as well as patients stay is shorter in U. S hospitals (4.69 days compared to 13.3 days). This raises an important question of the significance of the MRI and the access to the facility as well. Patients, who are critically ill after stroke or have recent thrombolysis, are ill suited for MRI's so patient data is very significant before going ahead with MRI procedure. Acute stroke protocols are suggested for such patients to reduce scanning time if MRI is essential or it should be performed with minimum sequence required to make the diagnosis either using PWI or diffusion Weight imaging. However, if the only immediate actions have to be taken then MRI should be considered.