

Application Of World Wide Web And Internet In Radiology

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Abstract- Radiology is a treatment to treat cancer. Cancer is the biggest problem that attacks the human beings a lot. Radiology is not only used with medicine alone it also needs internet and World Wide Web for certain purposes. Exchange of information is the source to the progress in medicine. For the growth of medical information computers and their features plays a vital role. 36 millions of users are part of World Wide Web or internet that provides easy, rapid and efficient access of information's and exchange of information's so that it increases the growth in radiology. By the html pages it creates a page to radiology in which all the information about radiology are stored so that people get information about the treatment and they can understand that cancer is treatable. By multimedia presentations it creates a precaution among the wide audience. Use of multimedia images it provides people education about the radiology and how they can get the treatment. Internet also provides the reviews about the treatment this reviews are posted by the people who used this treatment these people say their view about the internet by seeing this reviews people who want to undergo this treatment will have the idea about this treatment. By the internet it is possible to share the information about radiology as text or images. Now a day's internet provides the database to store the information's of radiologists. Now a day's internet is used by both the educated and uneducated people so that uneducated people also know about the treatment.

Keywords- Radiology; Radiologist; PACS; WWW; X-ray

RADIOLOGY

Radiology is a science to diagnose and treat the disease in the body. It is a medical imaging technique. It means describing a disease in image format. There are lots of imaging techniques in medical field such as X-ray radiography, computed tomography. There is a radiology called interventional radiology it is medical procedure that is performed using the images. Radiology is a type of X-ray technique in this technique X-rays are projected into the human body and then a image is formed through the rays that passed in the human body that how it is absorbed and scattered.

RADIOLOGIST

Radiology is carried out by an person who knows radiology that person is called as the radiographer and he is also called as radiologic technologist. Radiographer is a doctor who is specially trained about the radiology Radiographer's work is to read the images that formed by sending the X-rays into a patient and produce the report about the diagnosis.

INTERNET IN RADIOLOGY

Internet takes a big part in everything in the world because part of internet helping in passing information's. As same there is a huge part of internet in evolution of radiology. Internet has a huge part because radiologists may work in on-site hospitals. Now a day's ambulatory care is common. Ambulatory care means here the patient is diagnosed and observed even outside the hospital. So it separates the patient and the radiologist. So that remote image interpretation is common now a day's so the soft copy of the image is transferred across the entire persons who involved in that medical procedure. So the radiologist can view it from a distance and he can say his view and he will say how to treat the disease.

It also corrects the shortage of radiologists because by using internet help the radiologists to view the patient diagonal image from where he works so he can manage more patients in short period. The number of radiologist growth rate is reduced to 1.2% but in 2008 growth rate is s14%. This is more critical situation because there is less no of radiologists so this challenging situation makes the patients critical because radiologist has to travel from one place to another place to check the patient. If the patient in critical situation he cannot arrive at correct time.

PACS

PACS defines Picture And Communication System. It is a medical imaging technology it helps to storage of images these images can be viewed from multiple systems. Here all the electronic images and the report created by radiologists through these images are transmitted by PACS, it replaces the manual file all the X-rays and images are stored in the system. It also

protects the x-ray film. PACS is used to store, retrieve the image and help to view the image from various systems. It has been mostly used in radiology departments because here more images are produced. Now a day's PACS also help in various departments like cardiology, oncology etc.. It not only shares the images to various modalities it also connects to ambulatory clinics and external hospitals.

PACS CONSISTS OF

- **Input-** from the digital analog device e.g., X-ray.
- Image storage device
- Image acquisition system
- Network to transmit the image
- Camera
- Display station to display the images

IMPORTANCE OF PACS IN RADIOLOGY

1. Patient may have the radiology investigation from different locations by different radiologists and doctors throughout the world. All the radiologists and doctors have to view the image that formed by passing the rays into the patient. So, fast transfer of image is essential without any less quality of images is important.
2. Any importance of PACS in radiology is if a patient is treated well and he becomes normal also if any other problems again so, storing this images in PACS helps to view the current X-ray and X-ray that already there and can decide the problem.
3. PACS is important to functioning of radiology
4. Apart from image sharing PACS also use to communicate to the hospital information server here all the information of patient is stored.

PACS FACILITIES IN MANY LOCATIONS

In many large hospitals there will be many branches in many locations. So, there will be a single radiology group for that hospital. That single group will manage all the branches by PACS. Then they will send the image to the radiologist from their location. So, radiologist views the image and radiologist will send the report to the location images.

INTERNET TO RADIOLOGIST

Radiologist studies about the radiology clearly but he can't know about the current easy technology. He can know about the technology using the internet. To do the medical procedure radiologists should have better communication with the patient. Internet will also help to interact with all the people

who involved in the medical procedure like doctors, etc.,. In emergency situations radiologist and others have to act faster. Doctors have to take the image of the patient and send it to radiologist and radiologist have to take a view on the image and create the report for that image and send the report to the person who is doing medical procedure.

MACHINES INVOLVED IN RADIOLOGY

X-RAY MACHINE

Here they pass X-rays into the human body. X-rays it is a type of electromagnetic radiation, it is used for producing images of body's interior organs without any problem.

CT SCANNER

CT means **Computer Tomography** its job is to create a sequence of cross sectional images of the body. It is used when a physician needs very clear image.

MRI MACHINE

MRI uses a magnetic field instead of radiation to make images of interior parts of the body. It also produces images for clear bone but CT scan cannot produce this.

INTERVENTIONAL RADIOLOGY

Interventional radiology uses the imaging technology like MRI, CT scans for medical procedures.

RADIOLOGY IS USED FOR TREATING

- Cancers
- Blocks in arteries or veins
- Back pain
- Kidney problems
- Liver problems

These radiologists are highly trained radiologists who gave extra training who know have to safely carry out the medical procedures.

ADVANTAGES OF USING INTERNET IN RADIOLOGY

- It makes the process easy.
- It reduces the time.
- By using this radiologist can seek a opinion from another radiologist. So, that he can correct the problem by others opinion.

- It is convenient and serves best for their patients.
 - It is cost effective.
 - Less travelling time.
 - No need of manual file for saving and retrieving the information about the patient.
 - Reduction of workload.
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DISADVANTAGES

- It is tough to adapt the technology.
- It is depend more on technology.
- Network problems delay the image to send late so, it is tough in emergency situations.
- Hackers- hackers may hack the information of the patients.

WWW

World Wide Web is an place where all the information's are stored here. By using WWW links are interlinked by hyperlinks and it can be viewed through the internet. It was invented by Tim Berners-Lee in 1990 who was employee of Switzerland's in CERN.

USES OF WWW IN RADIOLOGIST

Now a day's 36 million people are the part of worldwide network and they improved their infrastructure to give the fast and efficient access of internet because it is used throughout the world. So it is easy for radiologist to access the information sooner and easier.

For advertisement about the radiologist there is need of most attracted page or document so, www is used here. It creates huge audience because of interactive documents with multimedia effects. Wide use of images for radiology it makes education, clear interpretation through the internet.

With the use of World Wide Web (WWW) so file can be accessed by less no of people with lesser computer experience. People without less computer knowledge also use this WWW. This can be accessed by all OS like Microsoft windows, Macintosh and other graphical user interfaces (GUI). By this they invite all the radiologists' community to view the file and make the radiologist to say their way about that file.

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