SFHCI.F

Produce images using fluoroscopy

Overview

This standard is concerned with the examination of anatomical structures using fluoroscopy. This will be undertaken as part of a diagnostic and/or treatment process. The outcomes will be of sufficient quality to assist diagnosis and or treatment. This standard should be undertaken within the scope of your own role. Key people are those involved in the individual's care and others involved in provision of services. Users of this standard will need to ensure that practice reflects up to date information and policies.

Performance criteria

You must be able to:

1. apply standard precautions for infection control and other appropriate health and safety measures
2. ensure all necessary preparations have been made by the individual and staff before starting the procedure
3. check and prepare the equipment required for the examination
4. ensure the environment is conducive to maintaining the privacy and dignity of the individual
5. check the identification details before commencing the procedure in accordance with local policies and procedures
6. communicate with the individual / key people to facilitate their understanding of and co-operation with the examination
7. establish the individual's capacity to understand the procedure with the help of key people if necessary
8. obtain valid consent for the procedure in accordance with national and local guidelines
9. respect the individual's privacy, dignity, beliefs and decisions
10. clearly explain the procedure and possible outcomes, including risk, benefits and limitations
11. check individuals of child-bearing potential for pregnancy or possible pregnancy, if appropriate to the examination, and take action in accordance with local protocols
12. confirm the status of key people before the examination and, where their presence is required, adhering to local guidelines
13. examine previous relevant images and clinical information, where available, to ensure that the correct procedure and techniques are employed
14. assess the individual's clinical and physical condition prior to the start of the examination with a view to proceeding
15. give the individual clear information on the possible after effects of the use of contrast media and medicines
16. position the individual and adjust their clothing according to the protocols for the examination to be performed in a manner which allows an optimal outcome to be achieved while:

16.1 recognising the individual's need to retain their dignity and self respect

16.2 ensuring his/her comfort as far as possible

16.3 preventing the appearance of artefacts

17. position the imaging equipment appropriate to the examination technique with anatomical legends or electronic annotation correctly placed

18. apply, check and adjust appropriate exposure factors, collimation and radiation protection devices to minimise exposure to the individual whilst optimising diagnostic image quality
19. ensure the details of the individual are accurately recorded in the fluoroscopic equipment or if previously entered, check for accuracy
20. check the room prior to making the exposure to ensure that only essential, protected persons remain with the individual and that all local protocols have been adhered to
21. administer appropriate contrast media and medicines in accordance with the local protocols for the examination
22. seek confirmation that the individual is ready before the exposure is made and maintain communication with the individual/key people to facilitate their understanding and ensure their co-operation throughout the examination
23. observe the individual's condition and well-being at all times and take appropriate action
24. ensure that all dose reduction/protection processes have been employed
25. adjust the equipment to optimise the images for the purpose of the examination
26. monitor and accurately record the individual's exposure to ionising radiation throughout the procedure according to local protocols and local rules
27. capture permanent images where required and according to local guidelines for the examination
28. recognise where equipment malfunctions during the procedure and take appropriate action
29. check the identification of the images against associated documents
30. examine the images to ensure that the anatomical coverage is consistent with the examination request, the clinical information provided and local protocols
31. ensure the images are:
31.1 correctly labelled with the individual's orientation and identification details
31.2 are processed and inspected for satisfactory technical and diagnostic quality according to local guidelines and criteria
32. make a decision with the regard to the need to repeat any images or to take additional images to enhance the examination
33. following the preliminary imaging examination, inform to the appropriate person if an abnormality is observed on the image which is likely to require further investigation or treatment, following

departmental protocols
34. provide the individual with information relating to the procedure and aftercare where necessary
35. explain the process for obtaining results
36. record, collate and prepare appropriate information, documentation and images for transfer or storage according to local protocols
37. verify that the images have arrived/been stored according to local protocols
38. recognise where help or advice is required and obtain this from appropriate sources

Knowledge and understanding

You need to know and understand:

1. legal, organisational and policy requirements relevant to your role, the role of others in your organisation and the activities being carried out
2. the relevant national and local standards, guidelines, policies and procedures that are available and how and when they should be accessed
3. the importance of respecting individuals' culture, privacy, dignity, wishes, beliefs and decisions
4. the limitations of your own knowledge and experience and the importance of operating within your scope of practice
5. the roles and responsibilities of other team members
6. the importance of obtaining valid consent in line with national and local guidelines
7. clinical appropriateness of the examination request and the action to take when the request is not appropriate
8. gross anatomy of the area being examined
9. physiological and pathological processes relevant to the area being examined
10. the medical terminology relevant to the examination including abbreviations
11. when standard and additional views are required to aid diagnosis and to enhance the examination
12. the range and safe use of contrast media and medicines in fluoroscopic examinations
13. the behaviour of contrast media and medicines and how this may affect images obtained and their interpretation
14. the clinical conditions appropriate for fluoroscopic examination
15. the clinical implications of any allergies relevant to the examination
16. the recognition of the variations of normal anatomy demonstrable by fluoroscopy and contrast media within your scope of practice
17. the recognition of abnormal anatomy demonstrable by fluoroscopy and x-ray contrast media and the significance of such abnormality within your scope of practice
18. manifestations of individuals' physical and emotional status
19. production, interactions and properties of x-rays
20. the harmful effects of radiation to the human body and use of

radiation protection equipment

21. ways in which images can be captured, processed and permanently stored
22. how to adapt communication styles, ask questions, and listen carefully in ways which are appropriate for the needs of the individual
23. methods of communicating difficult and complex information to individuals and key people
24. the importance of providing individuals and key people with opportunities to ask questions and increase their understanding
25. the information that should be given to individuals before, during and on completion of the examination
26. the inter-relationship between Kilo Volt Peak (kVp) and Milliamperage (mA) and Time (seconds)
27. variables affecting exposure factors and how to manipulate exposure factors for the examination and the individual as appropriate
28. the technical and diagnostic quality requirements of the image
29. recognition of artefacts and their impact
30. factors which influence the decision to repeat images
31. equipment capabilities, limitations and routine maintenance including the quality control processes required by the operator
32. image manipulation and post processing
33. the importance of timely equipment fault recognition and local procedures for reporting these
34. contra-indicators to the procedure
35. the preparation of the individual, equipment and environment for fluoroscopic examinations
36. orientation and appropriate use of anatomical legends and electronic annotation
37. the range of techniques that may be used to optimise image quality and dose for the individual, including selection and provision of suitable projections, appropriate use of collimation and strategies to reduce dose to individuals and staff
38. the role of other imaging modalities and diagnostic investigations
39. relevant emergency procedures and the types and use of emergency equipment available
40. procedures relating to recording, collating and preparing appropriate information, documentation and images for transfer or storage according to local protocols

41. how to keep full, accurate and clear records in line with organisational procedures

External Links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB6 Assessment and treatment planning

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