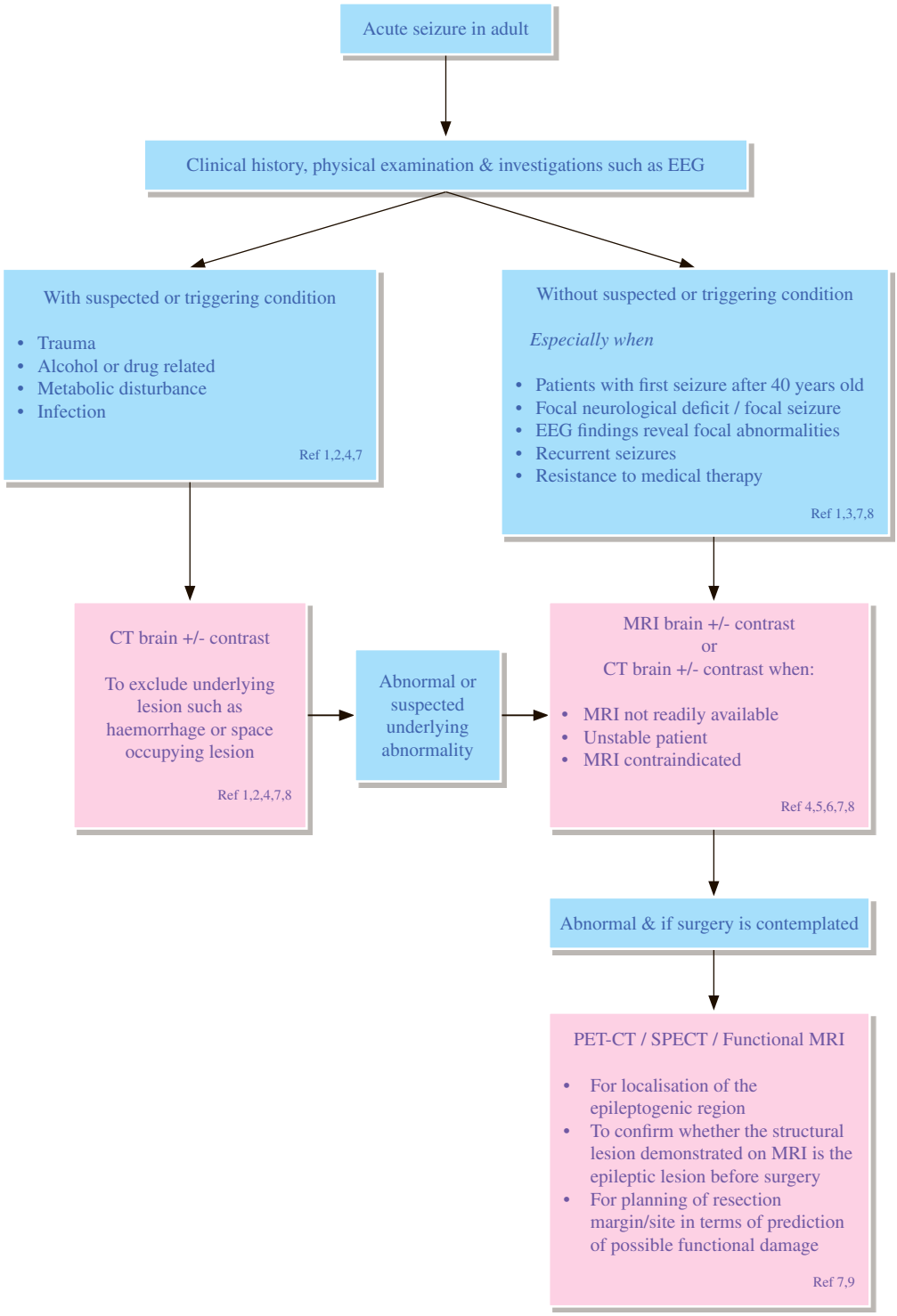
NR 5 Acute seizure in adult



REMARKS

Imaging is not indicated in idiopathic generalized epilepsy.

1 Plain radiograph

1.1 Skull x-ray (SXR) is generally not indicated in the investigation of seizure.

2 Nuclear medicine

2.1 Combined data from interictal and ictal single photon emission computed tomography (SPECT) scans give a lot more information than interictal scans alone.

2.2 Fluorodeoxyglucose (FDG) PET has high sensitivity and specificity in localizing the epileptogenic zone, especially in temporal lobe epilepsy.

2.3 Both SPECT and FDG PET-CT may be helpful in pre-operative planning.

3 CT

3.1 In acute or emergency setting, non-contrast CT brain can be the imaging study of choice.

3.2 CT is useful to detect intracranial haemorrhage or calcific lesion.

3.3 CT is an appropriate investigation if MRI is not readily available, in patients with unstable conditions or when MRI is contraindicated.

3.4 Contrast-enhanced examination should be performed if intracranial infection, tumour, inflammatory lesion or vascular pathology is suspected.

4 MRI

4.1 MRI is preferable to CT as the first imaging investigation in clinically stable and/or symptomatic patients due to its high sensitivity to small change in tissue, e.g. migrational anomalies, gyral malformations, etc.

4.2 In unstable patients, MRI is relatively contraindicated and needs close monitoring.

4.3 Coronal MRI is helpful to lateralize the temporal lobe seizure focus.

4.4 High resolution MRI sequences are preferred.

4.5 Contrast-enhanced examination should be performed if intracranial infection, tumour, inflammatory lesion or vascular pathology is suspected.

4.6 Functional MRI maybe helpful in pre-operative planning.

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