

PRESENTER:

Mrs. Ahlem Jouini, CT technologist
Dr. Hussein Kamel, Consultant Neuroradiologist

DEPARTMENT:

Radiology Department,
Hamad General Hospital, Hamad Medical Corporation, Doha, Qatar



Title: Implementation of Safe Approved International Standard: CT Head Scan in Infant without Sedation

PROBLEM:

CT head scan in infant was routinely performed under sedation. This required admission to day care unit, an area under high demand, resulting in delays in scheduling of the examination. Beside the additional risk of sedation, on the scan day, the patients went through numerous steps to achieve the scan resulting in a prolonged day care stay and family frustration.

AIM:

To attempt to perform the CT head scan without sedation, thus eliminating the risk associated with the sedation, reducing the pressure on the day care unit and the waiting time to get a CT head appointment and achieving patient and family satisfaction.

INTERVENTION:

1. Familiarized CT staff on how to perform a fast scan in a quiet atmosphere using simple tips.
2. Coordinated with day care staff to evaluate if the patient can cooperate to achieve CT without sedation.
3. Prepared CT scan room with few child friendly items.
4. CT technologist explained the examination quietly to children and families in a calm atmosphere.
5. A fast good quality CT head scan was performed for children aged between 0 to 6 years without sedation. The scan quality was checked with the attending radiologist before the patient left the department.
6. Only patients who were found impossible to examine without sedation were sent to day care for sedation.

TEAM:

- Dr Hussein Kamel: Consultant
- Dr Tahia Ahmed Salem: Consultant
- Mr. Nasser Al Mutawaa: Chief Technologist
- Mrs. Ahlem Jouini: CT Technologist

PROJECT SPONSOR :

- DR.Ahmed J.Omar Chairman of the Radiology Department.

RESULTS :

It was possible to achieve good quality CT head images in 35 out of 37 patients. In only two patients, sedation was necessary and was performed in day care.

Table 1. Numbers of patients with and without sedation

Patients where CT was achieved without sedation	Patients where sedation was necessary
35	2

Without sedation the whole stay period of the child and family inside the hospital was 3.5 hours instead of the 6 hours required when sedation and day care admission was necessary

Table 2. Time of exam with and without sedation

Average time required to perform CT when Patients required sedation	Average time required to perform CT when Patients did the examination without sedation
6.1 hours	3.5 hours

CONCLUSION :

- 1-Using this protocol, we succeeded in performing CT head examination without sedation in most of the patients. These patients do not need day care admission and should accordingly be booked directly by the radiology department. This should bring the waiting time for the CT head scan to one week instead of 3-4 weeks waiting for day care admission allowing a chance for other patient in more desperate need for the day care.
- 2-We succeeds to reduce the in-hospital time for the families from 6.1 to 3.5 hours. Thus achieving more patient and family satisfaction.
- 3- A small group of complex patients may still need to have the examination performed under sedation. These will continue to require special booking for day care admission.

NEXT STEP:

- 1- Implement the conclusion of this study and start routine independent booking CT head scans without occupying slot in day care.
- 2- Start a similar process to evaluate the possibility of performing MRI examination in infants without using sedation.