

# Assessment of knowledge and practices for nurses about the autonomic dysreflexia syndrome in the spinal cord patients Dr.

**Narmein B. Tofieq\* Dr. Haleema Y. Al-Rubayi\*\***

## **Abstract**

**Objective:** the aim of the study is to assess the knowledge and practices for nurses that working in wards of Ibn Al-kuff hospital for spinal cord injuries.

**Methodology:** descriptive study from the period of (1st of July to the 30th August 2005) about the knowledge and practical management when autonomic dysreflexia syndrome affects those patients whom sleeping in the wards of this hospital and its relationship with some variables.

The sample of the study consists of (100) nurses male and females are selected purposively. a questionnaire check list was designed for study purpose and applied by (test - retest) to improve the reliability, the validity of the assessment was determined through a panel of experts.

The data analyzed by using descriptive statistical approach (frequency, percentage, mean of score, test) and inferential data analysis approach (chi-square).

**Results:** the finding of the study indicated that the large number of these nurses did not have enough knowledge and practices about autonomic dysreflexia syndrome management during its occurrence.

**Recommendation:** the researchers suggested that especial education program should be developed and implemented for these nurses who work in the spinal cord injuries wards, the program should include, knowledge and practices relative to general, signs and symptoms, causes nursing intervention of the autonomic dysreflexia.

**Key wards :** nurses knowledge, autonomic, dysreflexia syndrome, spinal cord injury.

## **Introduction**

Autonomic dysreflexia or hyperreflexia is a life threatening condition that can occur in a person with spinal cord injury and it requires immediate treatment.<sup>(1)</sup>

This syndrome is more frequently seen in the client with spinal cord lesion at or about thoracic six (T6), but client with a lesions as low as thoracic eight (T8 ) have reported to have exhibited it. '

Health care providers must be aware of this problem and be able to intervene appropriately with and early intervention, the severity of an episode can be decreased

In appropriate or delayed treatment can have a serious consequences such as apnea , seizure , stroke , retinal hemorrhage , renal failure , subarachnoid hemorrhage , cardiac dysrhythmic , cardiac arrest or death <sup>(3)</sup>

\* Assistant Professor, Medical Surgical Nursing Department/University of Baghdad/College of Nursing

" Lecturer, Medical Surgical Nursing Department/University of Baghdad/College of Nursing

## Knowledge and practices for nurses about autonomic dysreflexia syndrome

Autonomic dysreflexia is a life-threatening condition that occurs in spinal cord injury patients. It is characterized by a sudden increase in blood pressure, which can lead to stroke, seizures, and even death. It is caused by a reflex response to a noxious stimulus below the level of the spinal cord injury. The most common cause is a full bladder, but other causes include tight clothing, skin irritation, and pain. Symptoms include a severe headache, flushing, sweating, and a rapid heart rate. Treatment involves identifying and removing the stimulus, and if necessary, administering antihypertensive medications.

It is potentially preventable, and clients should know about it so they can implement preventive measures to safeguard their health.

The nurse who is educated about autonomic dysreflexia can act as the patient's adviser in assuring that proper preventive measures are taken and that any needed treatment is given without delay according to accepted protocols.

According to the patient and caregiver must be taught that proper care in carrying out health maintenance regimens, such as bowel and bladder care, prevention of pressure sores, avoiding falls, burns, or other injury, and selection of proper shoes, and clothing can prevent many autonomic dysreflexia episodes.

### Methodology

Descriptive study using the assessment as an approach to identifying the nurses' knowledge and practice about the autonomic dysreflexia syndrome in the spinal cord injury patients.

The study was carried out during the period of 1st July - 30 August 2005. Ibn Al-Kuff hospital for the spinal cord injuries patients a purposive non-probabilistic sample of (100) nurses who were working in the five wards of this hospital and the criteria for selection of the sample includes:-

1. Nurses of both sexes who are working at the day shift.
2. Those who have been working for at least six months.

A questionnaire was designed and constructed by the researchers to measure the level of nurses' knowledge about it. The questionnaire consists of two parts:

Part I: including the demographic information sheet consists of (4) items.

Part II: including questions about

1. General understanding of this problem consists of (4) items.
2. Signs and symptoms of autonomic dysreflexia consists of (12) items.
3. Causes and pathophysiology of this problem consist of (6) items.
4. Immediate management and medical treatment to save patients' lives consists of (5) items. All questions were rated on a scale of (close-ended) response (Yes, No)

scored as 2 for Yes and 0 for No.

Validity of the questionnaire was determined through a panel of (5) experts. The experts had reviewed it and comments and suggestions relative to revision for each item, the result indicated that 85% of them agreed with one of the study items. Reliability of the questionnaires was determined through the comparison of responses in a test-retest.

Data analyzed by using frequencies, percentages, mean of score, inferential statistics (chi-square).

All statistical procedures were tested on a probability of  $p < 0.05$  for a significant difference and the mean of score was 1.5.

**Results**

**Table (1) demographic characteristics**

<b>Demographic Characteristics</b>	<b>F</b>	<b>%</b>
1-Age		
20-29	15	15
30-39	30	30
40 and above	55	55
2-Sex		
male	55	55
female	45	45
3- Year of working in SCI wards		
less than one year	40	40
more than one year	60	60
4- Educational level		
preparatory nursing school	30	30
secondary nursing school	40	40
institute and nursing college	30	30

This table shows that the distribution of age were ( 40 and above ) years old , ( 55%o) were male , ( 60%>) of them were working in .

**Table ( 2 ) general knowledge about the autonomic dysreflexia syndrome.**

<b>No</b>	<b>Items related to general knowledge</b>	<b>Yes F.</b>	<b>No F.</b>	<b>M. S I</b>
<b>1</b>	This syndrome always occurring person with spinal cord injury at above the T6 level	10	90	1.1
<b>2</b>	This syndrome occurs in male and female	15	85	1.2
<b>3</b>	It may occur even after the patient discharge from the hospital	15	85	1.2
<b>4</b>	The incidence rate of 48% - 90% intetraplegia or high paraplegic	10	85	1.1

This table indicated that ( 90% ) of the sample were answered (No ) in front of items ( 1 , 4 ) and ( 10% ) of them reported ( Yes ) , regarding items ( 2 , 3 ) the majority of the sample ( 85% ) answered ( No ) and ( 15% ) of them reported ( Yes ). All items of mean score were lower than 1.5



**Table ( 3 ) Nurses knowledge about the signs and symptoms of autonomic dysreflexia syndrome**

No	Items related to signs and symptom of autonomic dysreflexia syndrome	Yes F.	No F.	M. S
1	The b/p may be in crease .	10	90	1.1
2	The patient may have pounding head ach.	10	90	1.1
3	Diaphoresis and flushing above the level of the SCI.	2	98	1.02
4	Bradycardiac.	3	97	1.03
5	Pallor and goose flesh below the level of the SCI.	3	97	1.03
6	Anxiety.	2	98	1.02
7	Visual changes.	3	97	1.03
8	Nasal congestion.			
9	Abnormal dilation of the pupil.	2	98	1.02
10	Cardiac irregularities.	0	100	1
11	Patch erythem above the level of SCI.	0	100	1
12	Metallic taste in the mouth.	0	100	1

This table revealed that (100%) of the sample were answered ( No | front of items ( 1 0 , 1 1 , 1 2 ) . related item ( 3 , 6 , 9 ) the majority of the sampi ( 98% ) were reported (No ) and ( 2% ) of them were reported ( Yes ), related item ( 5 , 7 , 8 , 9 ) the majority of them were reponed ( No ) and ( 3% ) were answers (Yes). Regarding items ( 1 , 2 ) the most of them ( 90% ) were answered ( No ) ( 10% ) were answered ( Yes ). All items of mean score were lower than cut off por 1.5 .

**Table ( 4 ) Nurses knowledge about the causes of autonomic dysrefle syndrome.**

No	Items related to the causes	Yes F.	No F.	M. S
1	The main case is painful stimulus below the level of lesion.	10	90	1.1
2	One of the causes may be urologic.	10	90	1.1
3	One of the causes related to gastrointestinal.	8	92	1.08
4	The cause related to reproductive.	0	100	1
5	The cause related to skin.	10	100	1.1
6	There are miscellaneous causes.	0	100	1

This table revealed that the majority of the sample ( 100% ) were answer ( No ) related item ( 4 , 6 ) , regarding item ( 3 ) the most of ( 92% ) w; answered ( No ) and ( 8% ) of them were answered ( Yes ), related items (1,2. the most of sample ( 90% ) were answered (No ) and ( 10% ) were answered ( Y .all items of mean score under cut off point 1.5



**Table ( 5 ) Nurses practices about the immediate intervention.**

No	Items related to the immediate intervention	Yes F.	No F.	M. S
1	Raise the head of the bed and lower his / her legs.	5	95	1.05
2	Loosen all constrictive clothing.	3	97	1.03
3	Monitored B/P every 2-3 min.	3	97	1.03
4	The nurse should contact a physician immediately.	70	30	1.7
5	Look for the cases.	10	90	1.1

This table revealed that ( 95% ) of the nurses answers ( NO ) and ( 5% ) of them had answered ( Yes), related to item ( 1 ), related to items (2,3) most of the sample ( 91% ) were reported ( NO ) and ( 3% ) of them were answered ( Yes ) , regarding item ( 5 ) majority of the sample ( 90%>) were answered (NO) and ( 10%>) of them answered ( Yes ) and all items of mean score were under cut off point 1.5 except item (4).

**Table ( 6 ) Association between nurse knowledge and the certain variables (age, sex, years of working in SCI wards and educational level).**

Age			Sex			Year of working in SCI ward			Education		
X2 obs	X2 crit	D.F	2X obs	2X crit	D.F	X2 obs	X2 crit	D.F	X2 obs	X2 crit	D.F
24.5	5.99	2	1.0	3.84	1.0	4.0	3.84	1	2.0	5.99	2

This table showed that there is a highly significant association between the age and nurse's knowledge about this problem and significant association between the years of working in the SCI wards and nurse's knowledge about this problem, and not significant association with the sex and education level.

## Discussion

The finding showed that the most of the sample age were ( 40 and above ) years old , ( 55% ) were male , and also ( 60% ) of them working in spinal cord injury wards are more than one year , ( 40% ) of the sample had secondary nursing school Table (1).

Regarding the general nurses knowledge about autonomic dysreflexia Table (2) showed that the majority of the sample ( 90% ), ( 85% ) were poor knowledge about the problem.

The result disagreed with studies who revealed that the nurses must be aware the general knowledge about the autonomic dysreflexia<sup>(2,5)</sup>

This finding suggested the importance of the teaching the nurses about this problem.

Regarding the nurse's knowledge about the signs and symptoms of this syndrome, Table (3) showed that the majority of the sample their assessment showed that they did not have knowledge about this problem.

The result disagreed with studies who mention that the nurses should be known about the signs and symptoms about this problem

