

Rate of Condition Causes Respiratory Failure

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الخلاصة:

الهدف : هدف الدراسة هو التعرف على الحالات المسببة لعجز التنفس لكلا الجنسين وإيجاد العلاقة بين حالة الشفاء والوفيات مع الحالات المسببة لعجز التنفس .

المنهجية : دراسة وصفية أجريت في مستشفى اليرموك في وحدة انعاش التنفس للفترة من الأول من آب ٢٠٠٣ ولغاية الأول من آب ٢٠٠٤ وشملت عينة البحث ٣٠٠ مريض (١٥٠) ذكور و (١٥٠) إناث وتم استخدام الاحصاء الوصفي والتحليلي لغرض تحليل المعلومات .

النتائج : أظهرت النتائج بأن ٢٤,٤ % من المرضى قد أصيبوا بمضاعفات بعد العملية والحوادث والذي سببت عجز التنفس ، وأن نسبة (١١,٣ %) من المرضى المصابين هم ضمن الفئة العمرية من

(٧٩-٧٠) سنة واطهرت الدراسة لوجود علاقة ذات دلالة احصائية بين حالة الشفاء ونسبة الوفيات مع نوع الحالة المسببة لعجز التنفس .

التوصيات : اوصت الدراسة بتهيئة وتدريب الملاكات العاملة بوحدة الافاقة حول انعاش التنفس والعناية بالمريض

Abstract :

Objectives: The aims of the study are to identify the condition causes respiratory failure in both sex and to find out the relationship between prognosis and mortality rate with condition causes respiratory failure.

Methodology : Descriptive study was carried out in Al- Yarmook Hospital in Respiratory care Unit in Baghdad from the 1st of August 2003 to 1st of August 2004, the sample consist of 300 patients (150) males and (150) females, descriptive and inferential statistics procedures were applied to the data analysis

Results : The results shows that 24.4% of patients effect by post-operative complications and trauma as a results of respiratory failure , 11.3% from effected patients at age group (70-79)years and there are no significant relationship between prognosis and mortality rate with type of condition causes respiratory failure .

Recommendation : The study recommends to preparing and training of recovery unit staff for respiratory resuscitation and patient care.

Keyword : Respiratory Failure, Causes, Nursing.

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Introduction :

Respiratory failure to effect gaseous exchange may ensue from many causes e.g obstruction – epiglottis , carcinoma , in holed foreign body , asthma, bronchiolitis , emphysema , fluid – drowning , pulmonary oedema , blood pneumonia , pus ,restriction of respiratory movement of lungs , obesity , abdominal distension , pleural effusion , pneumothorax flair chest ,atelectasis , interference with blood flow to and from alveoli –pulmonary embolism , pulmonary hypertension , right ventricula failure[1] . Signs and symptoms of underlying disease plus restlessness , confusion , reduced B/P , pallor or cyanosis, air hunger , acidosis in acute respiratory failure but bicarbonat retention corrects this in chronic failure [2] . Diagnosis , Arterial blood gas measurement shows co2 partial pressure (paco2) raised above (50 mmhg) , Blood ph low in acute failure (respiratory acidosis) . Normal in chronic failure but bicarbonate level raised . Low vital capacity [3] . Treatment best in intensive care unit where emergency facilities for intubation trachostomy , constant monitoring,and specialist staff constantly in attendance [4] .

Oxygen sufficient to keep (pao2) over (60) mmhg .Care needed in chronic respiratory failure in which respiratory centre operates on (pao2) and (paco2) [5] . Drugs include those necessary to alleviate underlying condition antibiotics , bronchodilators , humidifier , expectorants , and those to correct acid base balance [6]

Physiotherapy , should be instituted at earliest possible time . Patient cooperates if possible in active respiratory exercises , controlled coughing but passive postural drainage and thumping where patient unable to cooperate if necessary , respiratory assisted or taken over by machine assistance e.g (Bird) can be set to trigger by patients own inspiratory effort . Control machines can be set to deliver at predetermined rate, flow and (O2) concentration . Monitoring of rate , peak pressure, tidal volume , (pao2) and (paco2) [7] .

Harrisons study found that the mortality rate of patients was (50 % - 60%) due to respiratory failure approximately (25%) causes of respiratory failure due to one riske factor and (42%) for patient have two risk factors ,(85%) they have three factors

(35%) they have chest infection (30%) they suffer from poor inhallation and (17%) they suffer from lung edema [8] .

The research aims to :

- 1- Identify the condition causes respiratory failure .
- 2- Identify the age group affected.
- 3- Find relationship between prognosis and mortality rate with type of condition causes respiratory failure .

Methodology

Purposive study was carried on 300 patients (150males and 150females) with respiratory failure were admitted to respiratory care unite in Al- Yarmook Hospital from 1st of August 2003 to 1st of August 2004 in Baghdad .

The questionnaires which was developed in the study consist of (27) items concerned with condition causes respiratory failure , age of patient , prognosis and mortality rate .

The validity of the instrument was established through a panel 3 of experts. They were as follow in medical field and they have 10 years of experience in respiratory care unit .

Data were analyzed through descriptive statistics (frequency, percentage) and Inferential statistics (Chi-Square).

Results

Table(1) Distribution of patients according to condition causes respiratory failure

Variable	No.	%
1- post-operative complication	73	24.4
2- Trauma	73	24.4
3- Poisoning	47	15.7
4- Asthma	31	10.3
5- Thyroid	19	6.3
6- Guillian Barre Syndrom	15	5.0
7- C.V.A	12	4.0
8- Epilepsy	12	4.0
9- Nephritis	10	3.3
10- Pulmonary edema	8	2.6
Total	300	100

The results revealed that the majority of condition causes respiratory failure were post-operative complication and trauma (73%) and (8%) of condition were pulmonary edema.

Table(2) Distribution of condition causes respiratory failure according to patient age

Age Causes of R.F	10-19		20-29		30-39		40-49		50-59		60-69		70-79	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1-Post operative complication.	2	5.1	3	7.9	8	18.2	7	18.1	20	42.5	15	25	18	53
2- Trauma.	8	20.6	12	31.6	13	29.5	7	18.1	16	34	15	25	2	5.9
3- poisoning	12	30.7	5	13.1	6	13.7	8	21	3	6.4	8	13.3	5	14.7
4- Asthma.	10	25.6	5	13.1	5	11.5	4	10.5	2	4.3	5	8.3	0	0
5- Thyroid	0	0	5	13.1	3	6.8	3	7.9	2	4.3	5	8.3	1	3.0
6-Guillian Barre	5	12.8	5	13.1	2	4.5	2	5.5	1	2.1	0	0	0	0
7- C.V.A	0	0	0	0	0	0	0	0	0	0	7	11.8	5	14.7
8- Epilepsy	2	5.2	2	5.4	2	4.5	2	5.5	1	2.1	2	3.3	1	2.9
9- Nephritis	0	0	0	0	3	6.8	3	7.9	2	4.3	1	1.7	1.0	2.9
10- P. edema.	0	0	1	2.7	2	4.5	2	5.5	0	0	2	3.3	1.0	2.9
Total	39	13.0	38	12.7	44	14.6	38	12.7	47	15.7	60	20	34	11.3

The finding revealed that the patients with (70-79) years old were 11.3% , 53% of them suffering from respiratory failure as a results of post-operative complication and 25% of age group (60-69) years had respiratory failure as a results of the same causes.

Table (3) Relationship between prognosis and mortality rate and type of condition causes R. F.

Prognosis and mortality Causes of R.F.	Recover		Die		%
	%	No.	%	No.	
1- post-operative comp.	59.9	64	13.1	9	73
2- Trauma	59.9	64	13.1	9	73
3- poisoning	38.5	40	8.5	7	47
4- Asthma	25.4 25		5.6	6	31
5- Thyroid	15.6	15	3.4	4	19
6- Guillian Barre	12.3	10	2.7	5	15
7- C.V.A.	9.8	8	2.2	4	12
8- Epilepsy	9.8	8	2.2	4	12
9- Nephritis	8.2	6	1.8	4	10
10- Pulmonary edema	6.7	4	1.3	4	8
Total		246		54	300
X^2 :- Observed: 21.21 Critical : 15.5 df: 8 P : < 0.05					

The findings shows that no significant relationship between prognosis and mortality rate with type of condition causes respiratory failure .

Discussion

1- Throughout the course of data analysis of present study the finding showed that majority 24.4 % of patients effected by post – operative complication and trauma as a causes of respiratory failure and 2.6 % of patients have pulmonary edema (table 1) .These results agree with Chendrasekhar which stated that pulmonary impairment is a well-known complication in patients with trauma injury (C4-T1) lower cervical spine injury with neurologic deficit [10] .

2- It was found that age group (70-79) years represented 11.3% in the study sample ,53% of them suffering from respiratory failure as a results of post-operative complication and 25% of the age group (60-69) had respiratory failure as a results of the same causes . The results also revealed that trauma represented the second most important cause of respiratory failure . (table 2) .

3- Table (3) findings shows that no significant relationship between prognosis and mortality rate with type of condition causes respiratory failure . These results disagree with Vicent study which done at forty ICUs in 16 countries on 458 (32%) were admitted to ICU with acute respiratory failure (ARF) and they need for respiratory support . Patients who presented with AFR were older than the other patients (63vs 57 years) and more commonly had an infection . the length of ICU stay was longer (6vs 4 days) and the mortality rate was more than double (34% vs 16%)[11] .

Recommendations :

- 1- Preparing and training of recovery staff unit for respiratory resuscitation after surgery .
- 2- Planning and developing educational program by Mass-media about accident and injury for all age group .
- 3- Implementing training program for community about first Aid .

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