**Audit for anaphylaxis management**

**Subject\management of anaphylaxis in ER department**

Auditor Leader \ Dr. Faroug Elrashid Mustafa Omer.

Standard used\ NHS Guidelines.

Persons involved \ Patients who had anaphylaxis and anaphylactic shock.

Supervision by \ Dr. Ehab Ibrahim the head of ER department

**Abstract**: Anaphylaxis is a severe life-threatening, generalized or systemic hypersensitivity reaction. It is characterized by rapidly developing, life- threatening problems involving; the airway (pharyngeal or laryngeal oedema) and/or breathing (bronchospasm with tachypnoea) and/or circulation (hypotension and/or tachycardia).In most cases, there are associated skin and mucosal changes. Anaphylaxis and anaphylactic shock are considered as one of the emergency cases which require immediate action to treat them. The reason for this auditing to find out the best way of management of these cases in order to reducing mortality rate and long term complications.

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Keywords: Anaphylaxis; severe; life-threatening; hypersensitivity; reaction; pharyngeal; laryngeal; oedema;

Bronchospasm; tachypnoea; circulation

**Methodology**

I conducted my audit of management of anaphylaxis and anaphylactic shock according to NHS guidelines and RCEM guidelines .

According to my observation of number of anaphylactic cases which were treated her in ER ,I found malpractice in dealing with them.

After reviewing the guidelines and discussing them in our weekly department meeting , remarkable reducing in the mortality rate and complications were noticed

The patients were not involved who had a simple allergic reaction.

The period of study was for 4 weeks.

**Introduction**

**Definition of anaphylaxis**

 Anaphylaxis is a severe life-threatening, generalized or systemic hypersensitivity reaction. It is characterized by rapidly developing, life- threatening problems involving; the airway (pharyngeal or laryngeal oedema) and/or breathing (bronchospasm with tachypnoea) and/or circulation (hypotension and/or tachycardia).In most cases, there are associated skin and mucosal changes.

 Anaphylaxis and anaphylactic shock are considered as one of the emergency cases which require immediate action to treat them.

 The reason for this auditing to find out the best way of management of these cases in order to reducing mortality rate and long term complications.

 I believe that follow the guidelines in treatment is paramount. Thus , I try to find out the main problems in management that issue in our department .In addition to that ,looking for if we follow the guidelines in treatment.

**The study according to my observations before reviewing guidelines**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ACTION TAKEN IN ER | c\p | ALLERGEN | GENDER | AGE | Name |
| Soluicortive 100 ml and chlorphenamineDischarge after 2h | wheezy chest hypotension and tachycardia | Nuts | Male | 18 years | Mahmed Khaled Ali123542 |
| Dexamethone 12.5mg and chlopehnamineDischarge after 1h | Sob dizziness and tachycardia | unknown | male | 28 years | Salem Abdo Zaher12875 |
| Solucortive 50 ml and IV Fluid and chlorphnamine 10mlDischarge after one day admission | Sob shocked tachycardiaUnrecordable blood pr | Chocolate | Female | 9 years | Rodyna baksh Ahmed15462 |
| Antihistamine tab | Wheals allover the body and itching | Unknown | Female | 16 years | Marym Salem Ali12546 |
| DEXAMTHONE IM AND CHLORPHENAMINE IMDischarge after 1 h | Abd pain sob itching all over the body | After taken antibiotic IV | Male | 45years | Jossef Mohamed Khaled 32412 |
| Iv fluid solucortive and chlorphenamineDischarge after 2 h | Dizziness sob whealsAbd pain | Agumentain tab | Male | 41 years | Sayed ahmed Syed12825 |
| Solucortive IMAdmission for one day | Sob, whealsHypotension tachycardia | Unknown | Male | 1 year | Freed Ihab jamel12875 |

Outcome \the first 2 cases AND 4TH AND 5TH ONE retain back at other shift with same problem( BIPHASIC REACTION).

The third case improved .the last case deteriorate and admitted in PICU

**GUIDELINES FROM NHS:**

Adrenaline is the first line of treatment

**Adult\**

A dose of 500 micrograms adrenaline 1: 1000 solution (0.5 ml) should be administered intramuscularly, and repeated after about 5 minutes in the absence of clinical improvement or if deterioration occurs after the initial treatment, especially if consciousness becomes, or remains impaired as a result of hypotension. In some cases several doses may be required.

**Children \**

> 12 years up to 500 micrograms IM (300 micrograms if child is small or pre pubertal

 6 - 12 years 100 mg IM

 6 mths – 6 years 50 mg IM

Child less than 6 month 25mg IM

Beta 2 Agonist Administration

An inhaled beta2 agonist such as salbutamol is useful as an adjunctive measure if bronchospasm

Intravenous Fluid Administration

If severe hypotension does not respond rapidly to drug treatment, fluid should be infused.

A rapid infusion of 500 – 1000 mL of 0.9% normal saline may be needed. Children should receive 20 ml/kg of 0.9% normal saline rapidly, followed by another similar dose if there is no clinical response.

**Observation for Adults & Young People (16 Years or Older)**

 Adults and young people aged 16 years or older who have emergency treatment for suspected anaphylaxis should be observed for 6-12 hours from the onset of symptoms, depending on their response to emergency treatment.

**Admission for Children (Younger than 16 Years)**

 Children younger than 16 years who have emergency treatment for suspected anaphylaxis should be admitted to hospital under the care of a paediatric medical team.

**The study according to my observations after reviewing guidelines**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Actions were taken in ER  | Clinical pictures | allergen | age | Sex | Name  |
| ADRENALINE .5MG IMSOLUCORTIVE 200ML IVCHLORPHENAMINE 10MGVENTOLIN NEBLIZER ADMITTED UNDER OVSERVATION FOR 12 H | SOB ,PALPATION ,ABD PAIN, WHEEZY CHESTABP90\76PULSE 112LARANGEL EDEMA  | UNKNOWN | 34 | F  | SAMYA AHMEDDIQ12347 |
| ADRENALINE .5MG IM SOLUCORTIVE 200ML IV CHLORPHENAMINE 10MGVENTOLIN NEBLIZER ADMITTED UNDER OVSERVATION FOR 24 HFLUID IV MAST CELL TRYPTASE TEST  | SKIN CHANGES, SOB BILATERAL WHHEEZY CHEST BLOOD PR UNREQURDABLE  | CHOCHOLATE | 20 | F | ZINAB ALI SEEDIQ14532 |
| ADRENALIN 300MICRO SOLUCORTIVE 100ML IV CHLORPHENAMINE 5MGVENTOLIN NEBLIZER ADMITTED IN THE WARD UNDER PEDIATRIC SUPERVISION  | SKIN CHANGES, SOB BILATERAL WHHEEZY CHEST ABP100\50PULSE120 | UNKNOWN  | 6 | M | QASEM ESSAM ALI12673 |
| ADRENALIN 150MICRO SOLUCORTIVE 50ML IV CHLORPHENAMINE 2.5MADMITTED IN THE WARDVENTOLIN NEBLIZER UNDER PEDIATRIC SUPERVISION  | SOB ,ABD PAINWHEEZY CHEST BILATRERALLY ABP90\79PULSE100  | ANTIBIOTIC TAB | 2 | F | ASMA SAMY AHMED12465 |
| VENTOLIN NEBLIZERADRENALINE .5MG IMSOLUCORTIVE 200ML IVCHLORPHENAMINE 10MG  | SKIN CHANGESWHEEZY CHEST BILATERALLY VITALLY STABLE  | POST COLLOID INFUSION | 50 | M | ZAINALI AHMED 13425 |

**OUTCOME\**

Most of the cases after observation and receiving the treatment in ER did not retain back only follow up with dermatologist in the clinic

The admitted pediatric patients her condition significantly improved .

**THE RESULT OF THIS AUDIT**

After following the guidelines in management the number of mortality rate reduced and complications

The improvement of the cases were noticed significantly

2/14/2021