**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.

[Faroug Elrashid Mustafa Omer. **Audit for anaphylaxis management.** *N Y Sci J* 2021;14(12):58-62] ISSN 1554-0200 (print); ISSN 2375-723X (online) <http://www.sciencepub.net/newyork>. 8. doi:[10.7537/marsnys141221.08.](http://www.dx.doi.org/10.7537/marsnys141221.08)

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 chlorphenamine  Discharge after 2h | wheezy chest hypotension and tachycardia | Nuts | Male | 18 years | Mahmed Khaled Ali  123542 |
| Dexamethone 12.5mg and chlopehnamine  Discharge after 1h | Sob dizziness and tachycardia | unknown | male | 28 years | Salem Abdo Zaher  12875 |
| Solucortive 50 ml and IV Fluid and chlorphnamine 10ml  Discharge after one day admission | Sob shocked tachycardia  Unrecordable blood pr | Chocolate | Female | 9 years | Rodyna baksh Ahmed  15462 |
| Antihistamine tab | Wheals allover the body and itching | Unknown | Female | 16 years | Marym Salem Ali  12546 |
| DEXAMTHONE IM AND CHLORPHENAMINE IM  Discharge 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 chlorphenamine  Discharge after 2 h | Dizziness sob wheals  Abd pain | Agumentain tab | Male | 41 years | Sayed ahmed Syed  12825 |
| Solucortive IM  Admission for one day | Sob, wheals  Hypotension tachycardia | Unknown | Male | 1 year | Freed Ihab jamel  12875 |

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 IM  SOLUCORTIVE 200ML IV  CHLORPHENAMINE 10MG  VENTOLIN NEBLIZER  ADMITTED UNDER OVSERVATION FOR 12 H | SOB ,PALPATION ,ABD PAIN, WHEEZY CHEST  ABP90\76  PULSE 112  LARANGEL EDEMA | UNKNOWN | 34 | F | SAMYA AHMED  DIQ  12347 |
| ADRENALINE .5MG IM  SOLUCORTIVE 200ML IV  CHLORPHENAMINE 10MG  VENTOLIN NEBLIZER  ADMITTED UNDER OVSERVATION FOR 24 H  FLUID IV MAST CELL TRYPTASE TEST | SKIN CHANGES, SOB BILATERAL WHHEEZY CHEST  BLOOD PR UNREQURDABLE | CHOCHOLATE | 20 | F | ZINAB ALI SEEDIQ  14532 |
| ADRENALIN 300MICRO  SOLUCORTIVE 100ML IV  CHLORPHENAMINE 5MG  VENTOLIN NEBLIZER  ADMITTED IN THE WARD UNDER PEDIATRIC SUPERVISION | SKIN CHANGES, SOB BILATERAL WHHEEZY CHEST  ABP100\50  PULSE120 | UNKNOWN | 6 | M | QASEM ESSAM ALI  12673 |
| ADRENALIN 150MICRO  SOLUCORTIVE 50ML IV  CHLORPHENAMINE 2.5M  ADMITTED IN THE WARD  VENTOLIN NEBLIZER  UNDER PEDIATRIC SUPERVISION | SOB ,ABD PAIN  WHEEZY CHEST BILATRERALLY  ABP90\79  PULSE100 | ANTIBIOTIC TAB | 2 | F | ASMA SAMY AHMED  12465 |
| VENTOLIN NEBLIZER  ADRENALINE .5MG IM  SOLUCORTIVE 200ML IV  CHLORPHENAMINE 10MG | SKIN CHANGES  WHEEZY 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