

Post sepsis syndrome



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Introduction

- Described consistent
 - Cognitive
 - Psychological
 - Physical, and medical defects

following severe sepsis

- Post sepsis syndrome is a relatively newly described pathologic
- Recorded at the turn of the twenty-first century



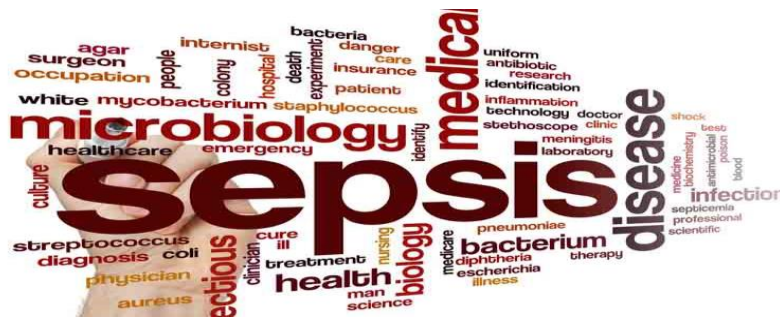
Introduction

- PSS is a condition that affects up to 50% of sepsis survivors
- Usually lasts between 6 and 18 months, sometimes longer



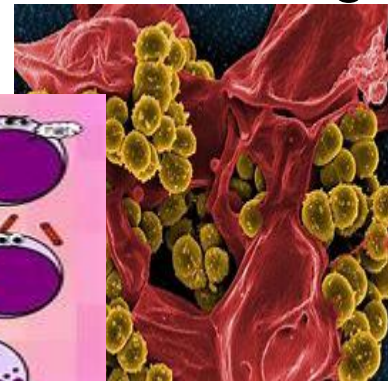
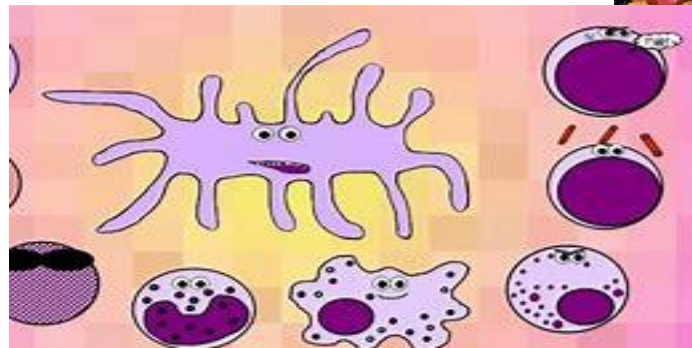
Introduction

- The sequelae had first been thought to be independent of the sepsis
- patients predisposed to the development of
 - sepsis
 - Cognitive and functional impairment



Introduction

- Sepsis as a disease related entity, once thought to be due to
 - The dissemination of pathogens
 - Redefined as dysregulation of the host immunological response
- Sepsis does not end with resolution of symptoms
- There are long term sequelae often with devastating consequences



Physical Symptoms:

- Lethargy
- Muscle weakness
- Breathlessness / chest pains
- Swollen limbs
- Joint and muscle pains
- Hair loss
- Feeling cold



Physical Symptoms:

- Dry / flaking skin and nails
- Taste changes
- Poor appetite
- Changes in vision
- Changes in sensation in limbs
- Repeated infections
- Reduced kidney function
- Excessive sweating



Psychological And Emotional Symptoms

- Anxiety
- Depression
- Nightmares
- Insomnia
- PTSD
- Poor concentration
- Short term memory loss
- Hallucinations
- Panic attacks
- Decreased cognitive functioning

- Loss of self-esteem





Risk Factor

- ICU admission
- Prolong hospitalisation
- Older patients
- Severe sepsis
- Chronic disease

Etiology

- For some patients, the cause of their PSS is obvious
- Blood clots and poor blood circulation
 - may have caused gangrene, resulting in amputations of fingers, toes, or limbs
- Damage to the lungs can affect breathing
- Developing viral respiratory infections
- Other organs damaged , such as kidneys or liver

Etiology

- There is more to PSS that cannot yet be explained such as
 - The disabling fatigue
 - Chronic pain



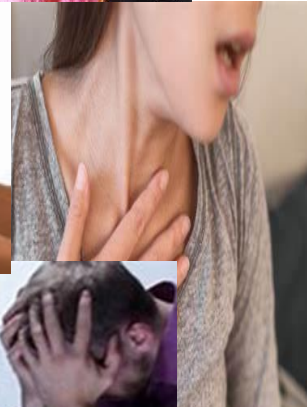
PSS in children

- Sepsis is one of the top 10 killers of children and adolescents
- Children under one year of age and those with conditions such as cancer are more susceptible to developing sepsis than their peers
- Those who survive can also develop PSS



PSS in children

- Symptoms include
 - Learning and attention difficulties
 - Post-traumatic stress disorder
 - Sadness and depression
 - Difficulty sleeping
 - Behavior changes
 - Motor dysfunction
 - Breathing problems
 - Feeding problems
 - Difficulty hearing and seeing



PSS in children

- Symptoms of PSS may not be spotted until They reach school age and find themselves academically behind their peers
 - Not developing normally
 - Shorter attention
 - Poorer memory
 - Lower IQ
- Adult study findings can't usually be applied to children



PSS in children

- In 2009, in the Netherlands looked at 82 children who were treated for septic shock
- All the children were healthy before sepsis
- 3 to 4 years after their hospitalization , they filled out questionnaires about their quality of life, depression, anxiety, and cognitive function



PSS in children

- **The results of the study :**

- 44% with their cognitive function
- 14 % who were in primary school and 15% who were in middle or high school attended special education schools
- Only 3% of children and 3.5% of teens in the general population need special education services



PSS in children

- In the United Kingdom, looked at 88 children, between 5 to 16 years, who were treated in a PICU
- The group was divided into three subgroups, one of which was children who had sepsis
- The children were followed for 3 to 6 months following their discharge from the PICU



PSS in children

- **The results showed :**
- Average IQ of 98.6, lower than average IQ of 107.23
- Teachers reported that students show more problems in academic performance



Rehospitalisation

- Causes for rehospitalisation are widely, including
 - systemic infection
 - redevelopment of sepsis
 - exacerbation of previous chronic illness
- Infection is the most common cause
- The lungs are the most common sites of infection



Therapeutic Strategies

- PSS is a very serious health condition that requires immediate medical attention
- No specific treatment , but most people will get better with time



Therapeutic Strategies

- Early sepsis care
 - Elements of care: antibiotics, fluid resuscitation, vasopressors, control source of infection
- Pain, agitation, and delirium management Elements of care:
 - Pain assessment, pain treatment, sedative choice, sedative monitoring, depth of sedation
- Early mobility



Therapeutic Strategies

- Doctors and other healthcare professionals must recognize PSS among sepsis survivors
- This way, patients can be directed to the proper resources
 - Emotional and psychological support
 - Cognitive behavioral therapy or neuropsychiatric assessment
 - Physical support such as
 - Physical therapy or neurorehabilitation





- Some things you can do:
 - Set small, achievable goals for yourself each week
 - Rest and rebuild your strength
 - Talk about what you are feeling with family and friends





- Learn about sepsis to understand what happened and prevent infections
- Ask your family to fill in any gaps you may have in your memory about what happened to you
- Exercise if you feel up to it
- Make a list of questions to ask your doctor when you go for a check up





- Ask your work about changes to your working hours or conditions while you're recovering
- Try some tips to help you sleep better
- Try to eat little and often if you have a small appetite and eat a balanced diet
- Do not try to rush your recovery – give yourself time



Natural ways to help

- Probiotics can help to both prevent and reduce a sepsis infection , By
 - supporting the good bacteria in the digestive tract
 - support your body's ability to absorb nutrients and help fight the infection
 - Supporting the immune system and can go a long way to preventing sepsis
- Zinc and selenium Propolis can help support immunity



