Follow-up and treatment of patients with Sickle Cell Disease hospitalized for Vaso Occlusive Crisis/or infection

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OBJECTIVE	Evaluation and treatment of SS, SC and S/β3thal patients (SCD)
NURSING	❑ Weight once a day ❑ Fluid balance IN / OUT 2x/day ❑ Vital signs every 4 hours: T°, Blood pressure, heart rate and respiratory rate (RR) ❑ Evaluation of pain at least every 4 hours ❑ Pulse oxymetry every 4 hours ❑ Contact the doctor if : ❑ Saturation < 95 % at pulse oxymetry or dyspnea ❑ RR < 10/mn or > 40/mn or drowsiness ❑ Encourage mobilisation and activity ❑ Incitative spirometry : 10 inspirations every2 h if bed resting
BLOOD TESTS **(At least)**	❑ Blood counts and reticulocytes once a day ❑ Electrolytes (every day if IV fluid administration), urea, creatinine, LDH at admission and later on, according to clinical course ❑ AST, ALT, bilirubin at admission and later on, according to clinical course ❑ If transfusion might be considered : check if extended RBC phenotype is available (+ irregular antibodies). If not, it should be performed. ❑ For transfusion: leukoreduced red blood cells, non irradiated ❑ If fever : blood cultures, urine culture, nose-throat aspiration for virus + according to clinical course
OTHER TESTS	❑ According to clinical situation ❑ Chest Xray if fever, chest pain and/or respiratory signs ❑ Please refer to protocol for management of SCD ❑ No systematic bone investigations (Xrays or isotopes) if bone pain. To be performed only in case of suspicion of osteomyelitis or avascular hip or shoulder necrosis (MRI preferably).

TREATMENTS	Hydration / oxygen Hydration IV or PO (2,5 l/m^2 maximum) (water, juices, nasogastric tube if needed) If IV : Glucose 5% with 5ml NaCl 30% per litre and 20 ml KCl. If lung infiltrate: - Reduce fluid administration (1 x basic requirements) - O_2 to maintain $SaO_2 \geq 95$ % (if below arterial gazometry must be controlled and performed at ambient air before O2 administration) - Stop oxygen 15 minutes 2 to 4 times a day at least or more often according to clinical signs. If pulse oxymetry < 95%, gazometry has to be performed at ambient air - Criteria for transfusion or exchange transfusion : see manual of haematology Medicine according to the chronic treatment of the patient : - Folic acid:…… ..mg/day - Hydrea : ……..mg/kg/day - Amoxycilline : ……. .mg 2x/day (suspend if IV antibiotics) Mobilisation Incitative spirometry : 10 inspirations / 2h during the day Treatment of pain : see specific protocol and contact your « pain team » Psychological support if needed
IN CASE OF FEVER	**Reduce fever with antipyretic drugs and :** **Start IV antibiotic asap after appropriate microbiological sampling:** - **Cefotaxime or Ceftriaxone** - In case of toxicity or allergy to cephalosporines: Vancomycine and contact infectiologists. **If lung infiltrate on chest X-ray or hypoxemia :** - Reduce fluid administration and add: - Clarithromycine (7,5 mg/kg/dose, max 500 mg 2x per day) for at least 5 days - Control X-ray after 48 hours or earlier if patient deteriorates - Check serology against Chlamydia and Mycoplasma

IN CASE OF FEVER, AT DAY TWO AND AFTER	

NURSING AND MECIDAL SUPERVISION	• Parameters and $Sp0_2$ (call the referring physician)
	• Check the results of the microbiological cultures (urine and blood
	• Twenty four hours later, check the results of the blood cultures
	  • If positive, repeat
	  • If presence of Salmonella, systematic look for osteomyelitis (bone scintigraphy)
	  • If negative: continue with Cefotaxime or Ceftriaxone for at least 48H; adjust treatment on a clinical base and microbiological cultures. When the antibiotic treatment is stopped, for patients less than five years old, take again antibiotic prophylaxis.
	• In the following days, see if treatment and supervision can be provided on an outpatient basis (to be discussed case by case)**.** All the following conditions must be met:
	- Apyrexia for at least 24 hours, not "toxic" and decrease of the inflammatory syndrome.
	- WBC <30 x 10^9 / L, neutrophils> 0.5 x 10^9/L
	- Absence of respiratory symptoms and pulmonary infiltrates on X-ray
	- In case of a new clinical event, opportunities for phone contact and return to the hospital within 18 to 24 h are provided to the patient (family)
	- If the family members are reliable, curative antibiotics might be continued at home as well as pain controlled by oral medication
	- Provide consultation slot available for review within 8 days
	
	New thorax X-ray if secondary fever or oxygen desaturation, cough, or polypnea

TREATMENT OF PAIN	Refer to protocol management of sickle cell

These sheets are intended as a practical aid in the management of the hospital and not a substitute for specialized monitoring.