Falência Hepática Aguda

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Manutenção das funções vitais

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ALF : Medical management ?

[…] *“Currently, there are no specific therapies of proven benefit except for emergency liver transplantation.”*

William M. Lee *et al* Hepatology 2008

[…] *“ However, rates of survival have improved substantially.”*

W Bernal, J Wendon NEJM 2013

Gestão Clínica da Falência Hepática Aguda

Organ System and Common Conditions	Assessment	Specific Elements of Care
Cardiovascular system		
Hypotension	Invasive monitoring for all conditions; echocardiography for low cardiac output and right ventricular failure	
Intravascular volume depletion		Correction of volume depletion
Vasodilatation		Vasopressors
Low cardiac output and right ventricular failure		Inotropic support
Respiratory system		
Risk of aspiration pneumonitis	Neurologic observation to monitor level of consciousness	Early tracheal intubation for depressed level of consciousness
Metabolic and renal systems		
Hypoglycemia	Serial biochemical testing	Maintain normoglycemia
Renal dysfunction, lactic acidosis, hyperammonemia		Renal-replacement therapy
Impaired drug metabolism		Review drug administration

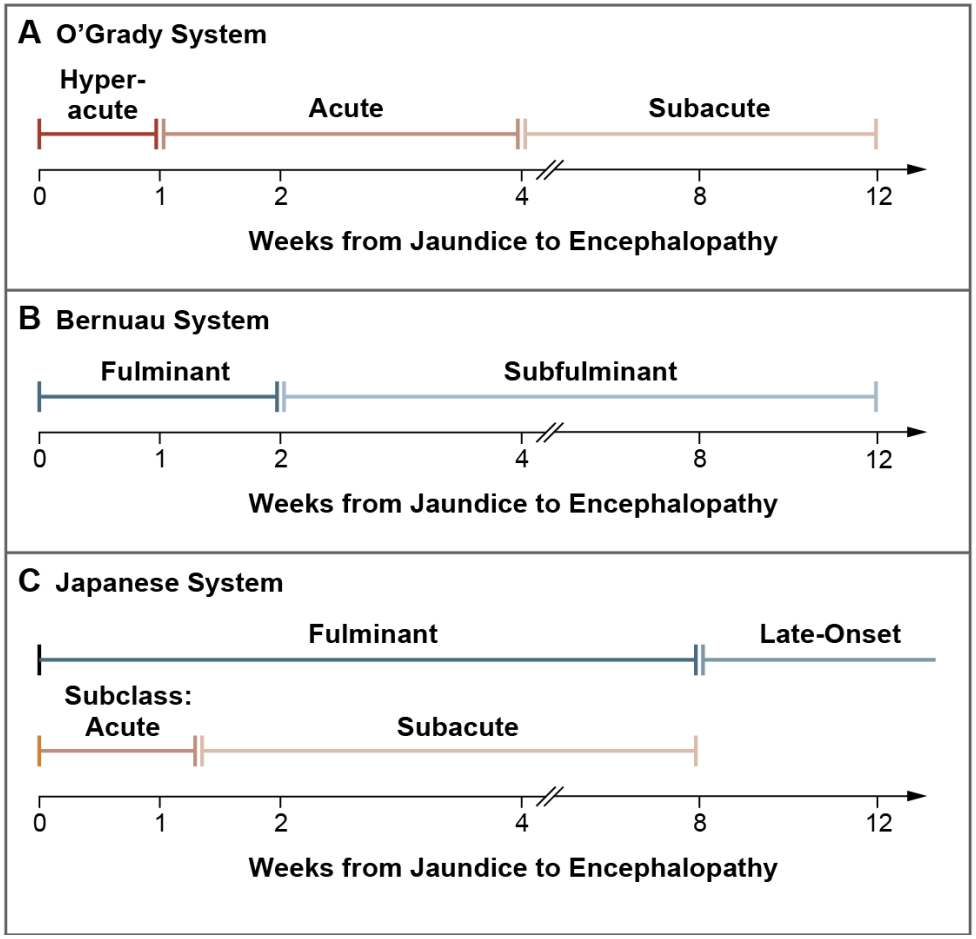
N Engl J Med 2013; 369:2525-34.

Gestão Clínica da Falência Hepática Aguda

Central nervous system		
Progressive encephalopathy	Neurologic observation; monitoring of serum ammonia level; transcranial ultrasonography; consideration of intracranial-pressure monitoring	Treatment of fever and hyponatremia; screening for sepsis High-grade encephalopathy: endotracheal intubation; avoidance of Paco2 of <30 mm Hg or >45 mm Hg; target for serum sodium, 145– 150 mmol/liter; risk
Intracranial hypertension		Interventions for pressure surges: osmotherapy (mannitol, hypertonic saline); temperature control; rescue therapies (indomethacin, thiopentone)

N Engl J Med 2013; 369:2525-34.

Classificação



N Engl J Med 2013; 369:2525-34.

Falência Hepática Aguda

1. INR ≥ 1.5
2. Ausência de doença hepática prévia
3. Doença duração ≤ 26 semanas
4. Encefalopatia grau ≥ 3

Bernal W et al., Journal of Hepatology 2016

SSC Guidelines

Nas primeiras 3 horas após admissão:

1. Avaliar lactatos

2. Hemoculturas antes de administrar AB

3. Antibioterapia largo espectro

4. Crist. 30 ml/Kg se HIPO ou Lact > 4 mmol/L

Surviving Sepsis Campaign Bundles - Revised 4/2015

SSC Guidelines (2)

Nas primeiras 6h após admissão:

5. Vasopressores para manter PAM ≥ 65 mmHg
6. Se PAM < 65 mmHg, reavaliar volémia e perfusão tecidular.*
7. Reavaliar lactatos se lactatos iniciais altos

*Dois dos seguintes:

PVC, ScvO2, ETT, avaliação “prova de volume”

Surviving Sepsis Campaign Bundles - Revised 4/2015

Factores de risco

- EH grau III/IV
- Idade > 35 anos
- Instabilidade hemodinâmica
- Amoniémia > 150 ummol/L
- Insuficiência renal
- Toxicidade por paracetamol

Bernal W et al., Journal of Hepatology 2016

Vasopressores

1. Administrar precocemente
2. Manter PAD > 50 mmHg
3. Aumento DC por aumento da pré-carga
4. Previnem sobrecarga hídrica
5. Diminuem a mortalidade

J.L. Vincent (ed.) Annual Update in Intensive Care and Emergency Medicine 2016

Recommendations of the U.S. Acute Liver Failure Study Group

“ [...] may be useful not only for the management of individual patients with acute liver failure, but also to improve the uniformity of practices across academic centers for the purpose of collaborative studies.”

Crit Care Med 2007; 5:2498-2508)

Moderate hypothermia to prevent ICH in ALF

- **Conclusions:** In patients with ALF at high risk of ICH, MH at 33–34º C did not confer a benefit above management at 36º C in prevention of ICH or in overall survival. This study did not confirm advantage of its prophylactic use. (ISRCTN registration number 74268282; no funding.)

Bernal W et al., Journal of Hepatology 2016

OLTX super urgente

Organ system	Paracetamol overdose	Sero-negative hepatitis (SNH), hepatitis A, hepatitis B, or an idiosyncratic drug reaction (IDR)
Liver	*INR >6.5 or PT>lOO s* **WITH BOTH** **AKI Stage 3 and Grade 3/4 HE**[a]	*INR >6.5 or PT >100 s or pH< 7.3* **WITH any grade of HE** **OR** *Three of the following :* **(INR >3.5 or PT >50s, bilirubin >300 µmol/L,** **jaundice to HE > 7 days, unfavourable etiologySNH or IDR, age >40)**
Metabolic	*pH <7.25* **OR** *Lactate >3.0 mmol/L*[a]	
Kidney	*AKI Stage 3* **(SCr >300 µmol/L or anuria)** **WITH BOTH** **(INR >6.5 or PT >I 00 s AND Grade 3/4 HE)** [a]	
Brain	*Grade 3/4 HE* **WITH BOTH** **(INR >6.5 or PT >100 s AND AKI stage 3)**[a]	*Any grade of HE* **WITH** **INR >6.5 or PT >100 s**
Cardiac	*In the UK increased inotrope or vasopressor requirement in the absence of sepsis* WITH 2 out of3 (INR >6.5 or PT >100 s, AKI Stage 3, Grade 3/4 HE)[a]	

Postgrad Med J. 2005;81(953):148-54

Lessons from look-back in acute liver failure? A single centre experience of 3300 patients

"Conclusions: the nature and outcome of ALF have transformed over 35 years, with major improvements in survival and a fall in prevalence of cerebral oedema and ICH, likely consequent upon earlier illness recognition, improved ICU care, and use of ELT."

Journal of Hepatology 2013 vol. 59 j 74–80

OLTX for ALF due to amanita phalloides: mortality in 13 years of anaesthesiologic practice giving a chance to survival

Euroanesthesia 2012 (Paris, France, 09-12 June 2012)

OLTX for ALF due to amanita phalloides: mortality in 15 years of anaesthesiologic practice giving a chance to survival

- **Sexo** masculino (60%)
- **Idade** média 37,7 anos (DP 25,7; mínimo 2 anos, máximo 67 anos)
- **Encefalopatia** - grau III/IV 60%; grau I-II em 30% e grau 0 em 10%
- **Bilirrubina** média 7,01mg/dL (DP 1,9; mínimo 3 mg/dL; máximo 9,4 mg/dL)
- **Protrombinemia** todos <10%

OLTX for ALF due to amanita phalloides: mortality in 15 years of anaesthesiologic practice giving a chance to survival

- **Creatinina sérica média -** 2,7mg/dL
- **Suporte Inotrópico -** 70% dos doentes
- **Dopamin**a - 100% dos casos de uso de inotrópico
- **Vasopressores** - 71,4% dos casos de uso de inotrópico
- **Tempo médio de ingestão até sintomas -** 7,8 horas

  Tempo médio de ingestão até transplante - 4,67 dias

  Mortalidade - 70% - maioria 72 horas pós-TXH

OLTX for ALF due to amanita phalloides: mortality in 15 years of anaesthesiologic practice giving a chance to survival

Gender	Age (years)	ASA	Weight (Kg)	Encephalopathy	Bilirubin (mg/dL)	Prot (%)	Creatinine (mg/dL)	Aminas
Female	2	IV	12	III (NTI)	5,4	<10	Normal	Dopa
Male	48*	IV	60	II	6,1	<10	1,0	—-
Male	8*	IV	25	III-IV (NTI)	8,6	—-	0,2	Dopa / Nor
Female	28	IV	70	III (OTI)	7,7	<10	1,9	—
Male	67*	IV	62	II	8,9	<10	6,15	Dopa
Male	40*	IV	84	III (OTI)	9,4	<8	4,47	Dopa / Nor
Female	66*	IV	55	III-IV (OTI)	7,8	<10	2,51	Dopa/Nor/Dobuta
Female	5	IV	20	I-II	6,4	<10	3,7	—-
Male	48*	IV	88	III-IV (OTI)	3,0	<8	3,7	Dopa / Nor / Epi
Male	65*	IV	65	0	6,8	<8	0,78	Dopa / Nor

* Falecidos

OLTX for ALF due to amanita phalloides: mortality in 15 years of anaesthesiologic practice giving a chance to survival

Gender	Age (years)	Ingestion -> Symptoms	Ingestion -> Transplantation	Transplantation	Mortality	Mortality/Morbidity
Female	2	+/- 8h	4 days	12-11-1997	Improvement	Renal failure; Biliar Tract Complications; Multiple Admissions
Male	48	+/- 8h	4 days	18-11-1997	Death	VF intraoperatory irreversible MOF
Male	8	+/- 5h	4 days	30-12-2002	Death (72 hours)	Re-transplantation (3rd day) Cardiorespiratory arrest at the end of intervention
Female	28	8-10h	6 days	11-11-2003	Improvement	—-
Male	67	8-10h	6 days	12-11-2009	Death (3 months)	Renal Failure; Septic Shock
Male	40	9h	6 days	17-11-2009	Death (3 hours)	MOF
Female	66	+/- 8h	6 days	23-11-2009	Death (4 hours)	MOF
Female	5	?	?	22-11-2010	Improvement	Re-transplantation (4th day)
Male	48	9h	2 days	30-10-2012	Death (11 months)	Renal failure; pneumonia; blindness
Male	65	+/- 5h	4 days	10-11-2015	Death (2,5 months)	Septic Shock/MOF Cardiac Failure

Strategic Principles

1. Patient Centered
   - Shared decision making
   - Patient engagement
2. Physician Led
3. Team Based
4. Evidenced-based care
5. Coordinate Care

Conclusões

1. Estratégias preventivas e reactivas
2. Partilhar/referenciar precocemente
3. Manutenção da homeostasia
4. Rever recomendações em cada doente
5. Mortalidade elevada sem transplante

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Semana Digestiva 2016
1 a 4 de junho
Palácio de Congressos do Algarve