Cuidados Urológicos no Paciente com Doença Neurológica

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ICS

Um Pouco de Fisiologia

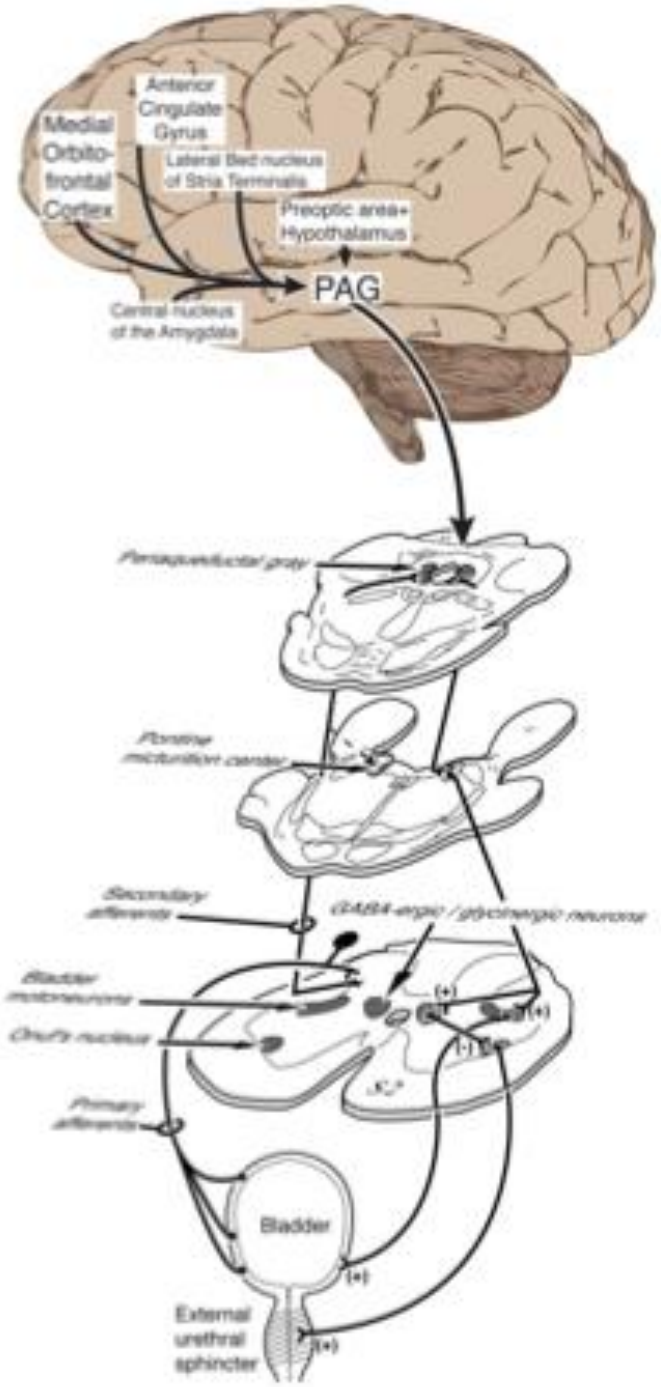
Princípios básicos do funcionamento do trato urinário:

- O trato urinário normal funciona com baixas pressões.
- Baixas pressões são resultado do comando neurológico do trato urinário.
- O comando é indireto: o ato miccional é continuamente suprimido pelos centros superiores -> o cérebro nos autoriza a urinar quando socialmente adequado.

Comando e sensibilidade

Coordenação

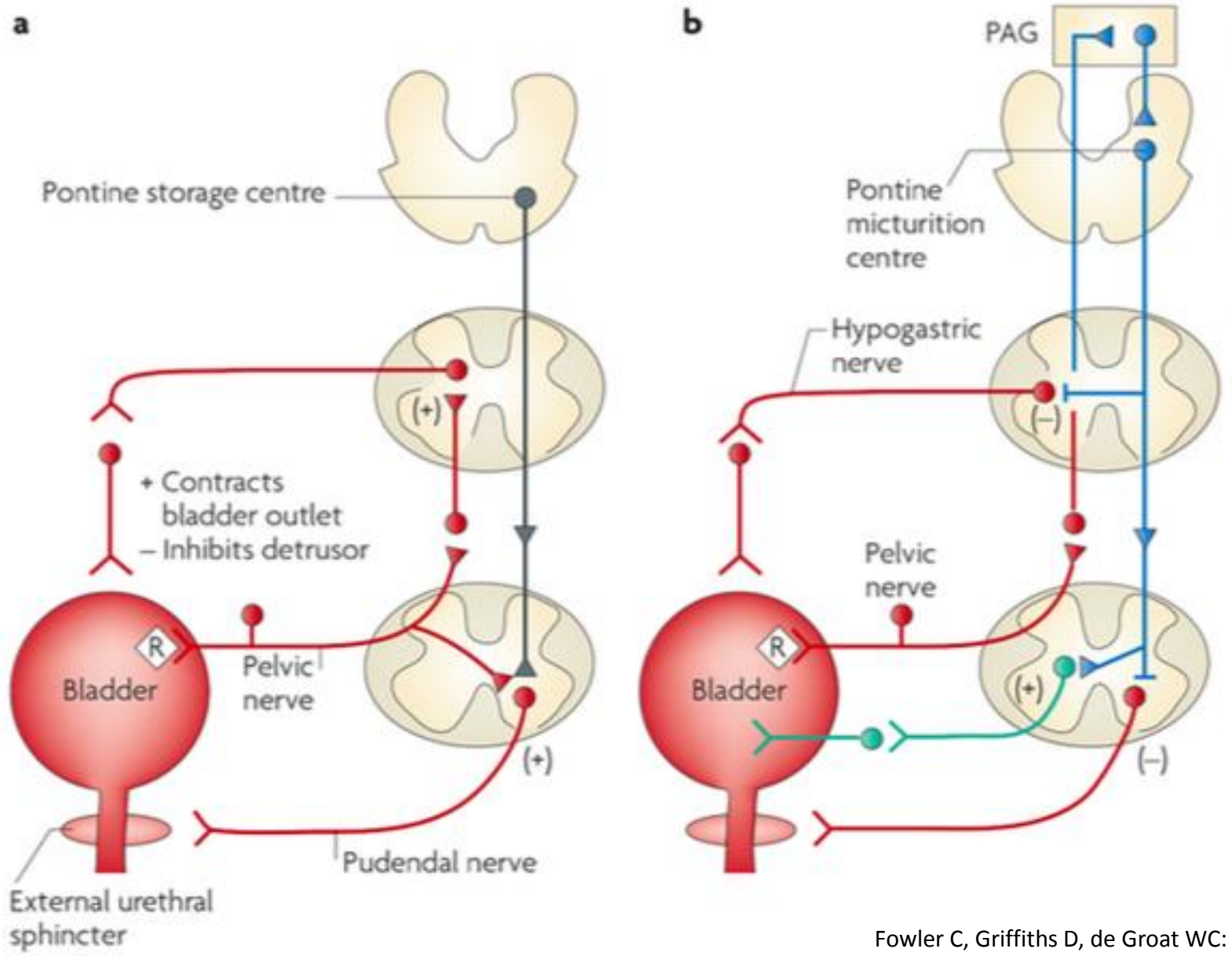
Arco reflexo efetor,
na medula sacral



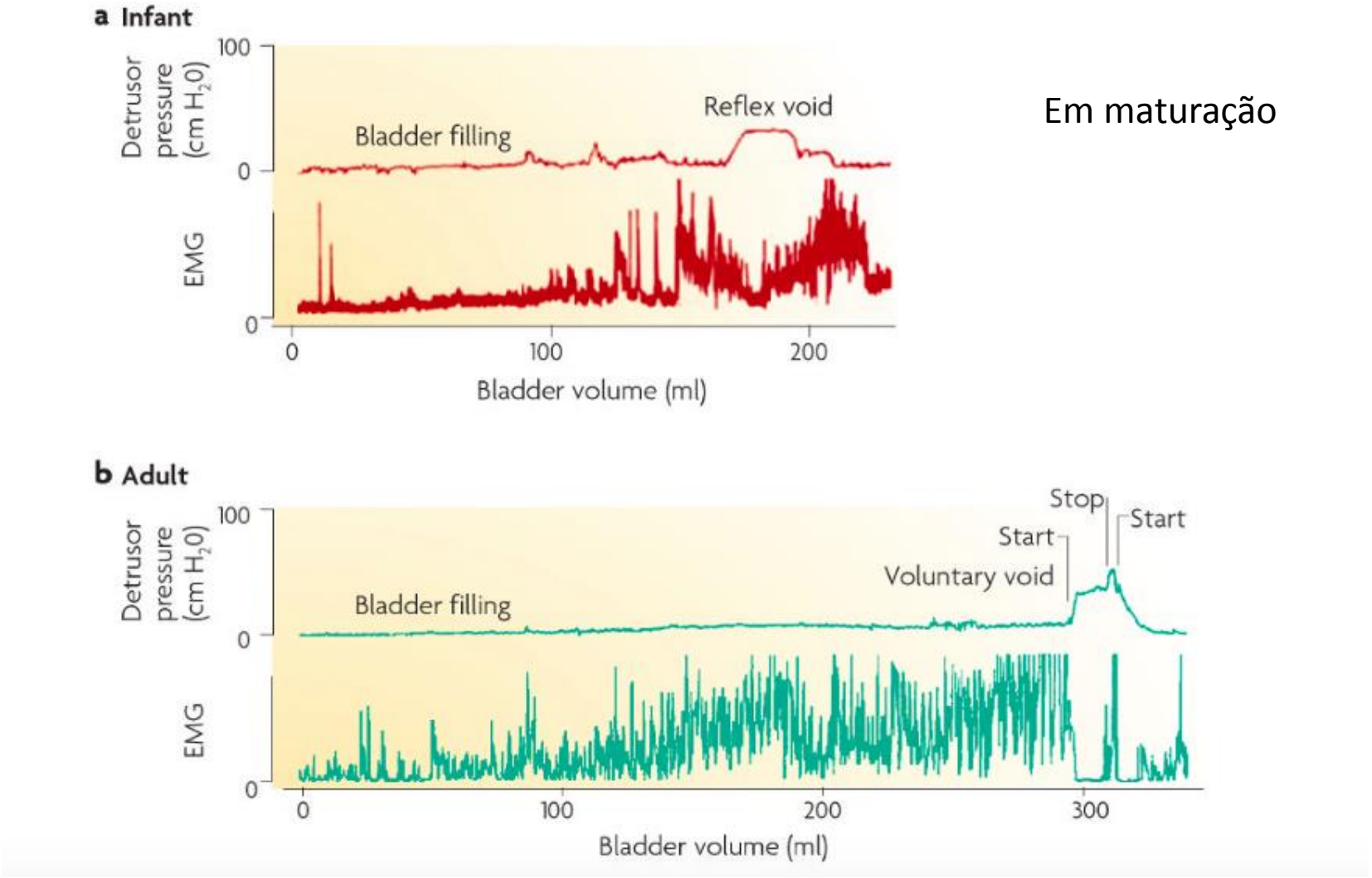
Holstege G: The emotional motor system and micturition control. Neurourol Urodynam 2010 29(1): 42-48.

Enchimento

Esvaziamento



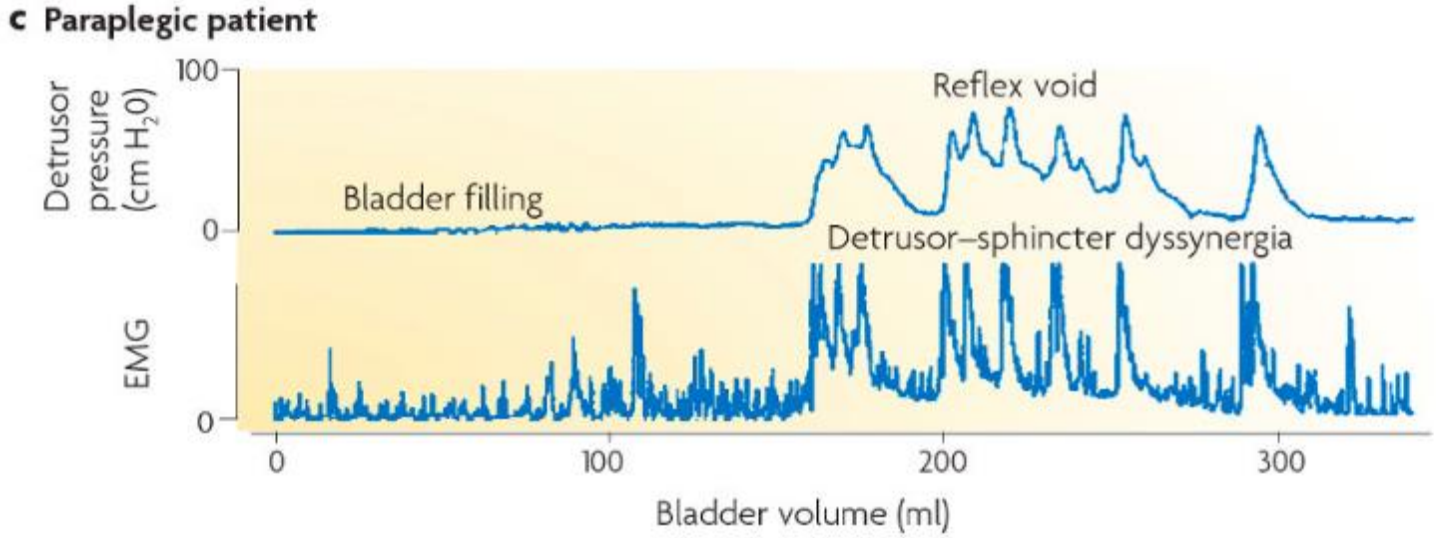
Fowler C, Griffiths D, de Groat WC: The neural control of micturition. Nature Reviews Neuroscience 2008 9(6): 453-466.



Em maturação

Fowler C, Griffiths D, de Groat WC: The neural control of micturition. Nature Reviews Neuroscience 2008 9(6): 453-466.

No paciente com lesão medular, entretanto:



Fowler C, Griffiths D, de Groat WC: The neural control of micturition. Nature Reviews Neuroscience 2008 9(6): 453-466.

O funcionamento normal do urinário requer integridade anatômica e funcional do sistema nervoso central e periférico (toracolombossacro).

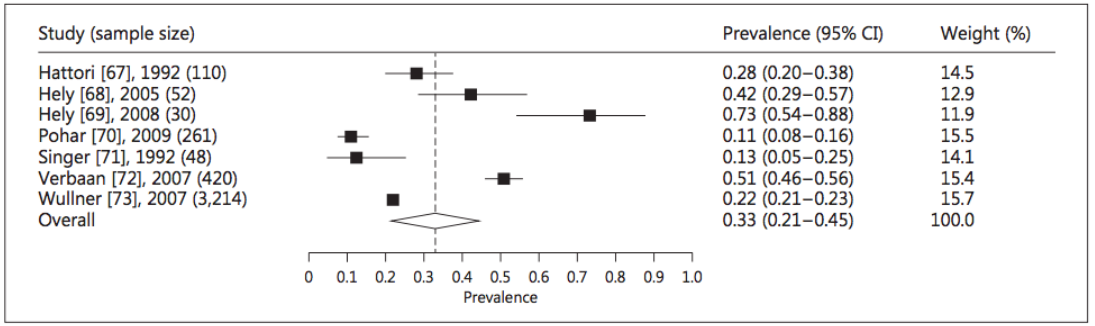
Etiologia, epidemiologia I

- Lesão medular, por trauma ;
- Mielopatias inflamatórias;
- Trauma encefálico;
- Doenças degenerativas do sistema nervoso central;
- Doenças vasculares do sistema nervoso central;
- Trauma cirúrgico (dos nervos periféricos);
- Mielodisplasias;
- Etc, etc.

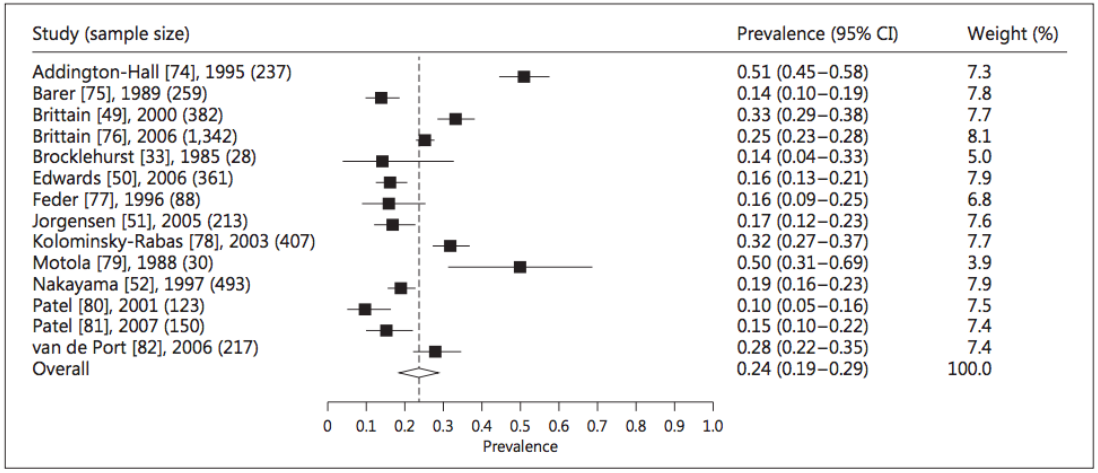
Etiologia, epidemiologia II

Revisão sistemática: prevalência de incontinência urinária em neuropatias

Parkinson 58.6% (34.3 – 83)



Doença vascular cerebral 66.7% (54.2 – 75.3)

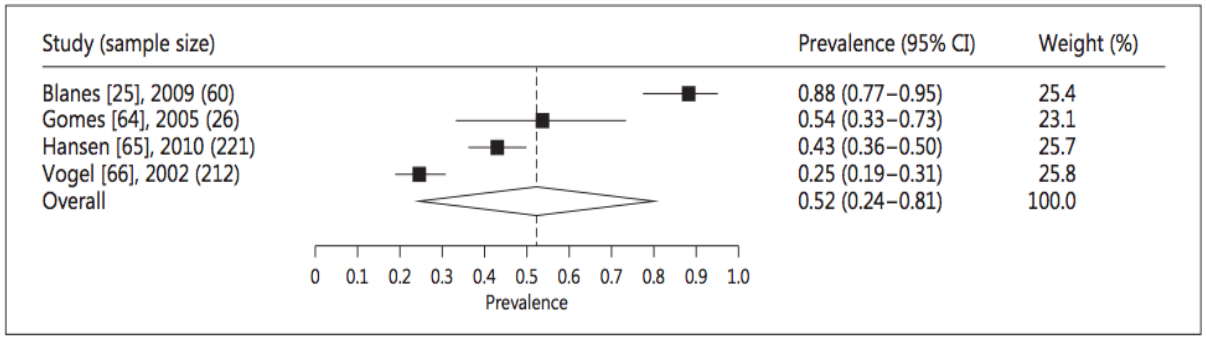


Ruffion, A et al: "Systematic Review of the Epidemiology of Urinary Incontinence and Detrusor Overactivity among Patients with Neurogenic Overactive Bladder." *Neuroepidemiology* 41, no. 3–4 (2013): 146–55.

Etiologia, epidemiologia II

Revisão sistemática: prevalência de incontinência urinária em neuropatias

Lesão medular 49.7% (37.3 – 62.2)



Ruffion, A et al: "Systematic Review of the Epidemiology of Urinary Incontinence and Detrusor Overactivity among Patients with Neurogenic Overactive Bladder." *Neuroepidemiology* 41, no. 3–4 (2013): 146–55.

Etiologia, epidemiologia III

Trauma medular

- $71/10^6$ casos ano = 14200 casos no Brasil (sem notificação obrigatória).
- Masc/feminino 4:1

Spina bifida (mielodisplasia)

- 0,11/1000 nv ano (Malásia)
- 0,29/1000 nv ano (EUA)
- 1,9/1000 nv ano (Índia)
- 1,63/1000 nv ano(Irã)
- 1,6/1000 nv ano (Brasil) = 4649 casos em 2014

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Mitchell, Laura E. "Epidemiology of Neural Tube Defects." *American Journal of Medical Genetics. Part C, Seminars in Medical Genetics* 135C, no. 1 (May 15, 2005): 88–94.
Campos, Marcelo Ferraz de, André Tosta Ribeiro, Sérgio Listik, Clemente Augusto de Brito Pereira, Jozias de Andrade Sobrinho, and Abrão Rapoport. "Epidemiology of Spine Injuries." *Revista Do Colégio Brasileiro de Cirurgiões* 35, no. 2 (2008): 88–93
Koch, Alex, X. S. Graells, and Ed Marcelo Zaninelli. "Epidemiologia de fraturas da coluna de acordo com o mecanismo de trauma: análise de 502 casos.[Epidemiologic study on vertebral fractures: analysis of 502 cases in accordance with the trauma mechanism]." *Coluna* 6, no. 1 (2007): 18–23. Fernandes, Rony Brito, Eduardo Gil França Gomes, Maurício Santos Gusmão, Djalma Castro de Amorim Junior, Marcus Thadeu Venâncio Simões, Joilda Fontes Gomes, Jayme Batista Freire, et al. "Clinical Epidemiological Study of Spinal Fractures." *Coluna/Columna* 11, no. 3 (2012): 230–33

Histórico do Tratamento da Disfunção Neurogênica do Trato Urinário Inferior

- Doenças urológicas eram a principal causa de mortalidade em pacientes com lesão medular, até a década de 1960;
- Hoje é a 4a. causa.

- Nos EUA, Holanda.

Perkash, I. "Long-Term Urologic Management of the Patient with Spinal Cord Injury." *The Urologic Clinics of North America* 20, no. 3 (August 1993): 423–34.
Staskin, D. R. "Hydroureteronephrosis after Spinal Cord Injury. Effects of Lower Urinary Tract Dysfunction on Upper Tract Anatomy." *The Urologic Clinics of North America* 18, no. 2 (May 1991): 309–16.
Osterthun, R., M. W. M. Post, F. W. A. van Asbeck, C. M. C. van Leeuwen, and C. F. van Koppenhagen. "Causes of Death Following Spinal Cord Injury during Inpatient Rehabilitation and the First Five Years after Discharge. A Dutch Cohort Study." *Spinal Cord* 52, no. 6 (June 2014)
DeVivo, M. J. "Causes and Costs of Spinal Cord Injury in the United States." *Spinal Cord* 35 (1997): 809–13.

Osterthun, R., M. W. M. Post, F. W. A. van Asbeck, C. M. C. van Leeuwen, and C. F. van Koppenhagen. "Causes of Death Following Spinal Cord Injury during Inpatient Rehabilitation and the First Five Years after Discharge. A Dutch Cohort Study." *Spinal Cord* 52, no. 6 (June 2014)

Progresso terapêutico por…

- Monitorização da função renal;
- Exames de imagem -> US;
- Avaliação da fisiologia da bexiga e uretra: urodinâmica;
- Cateterismo intermitente limpo, autocateterismo intermitente limpo;
- Microbiologia;
- Técnicas cirúrgicas;
- Medicações: drogas para diminuir a pressão da bexiga.

Harrison, Simon C. W. "Managing the Urinary Tract in Spinal Cord Injury." *Indian Journal of Urology : IJU : Journal of the Urological Society of India* 26, no. 2 (2010): 245–52. doi:10.4103/0970-1591.65399.

Mais importante

- Os melhores resultados são obtidos com a adoção de protocolos:

Avaliação inicial multidisciplinar;

Avaliações seriadas;

Intervenções nos momentos de risco;

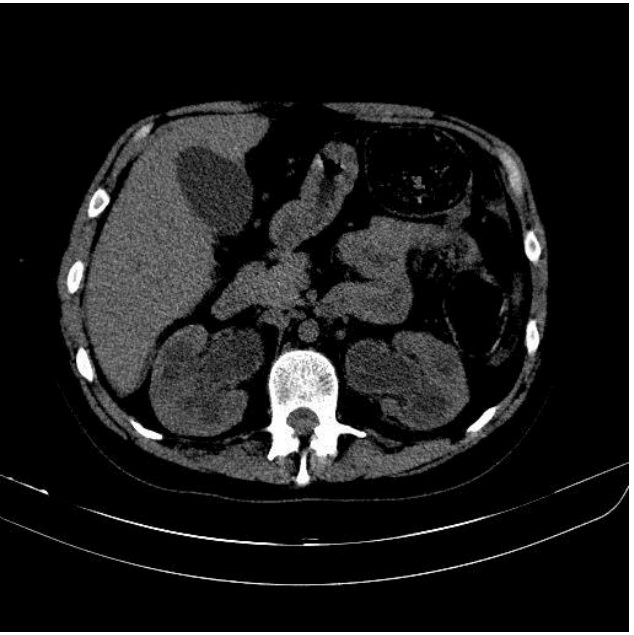
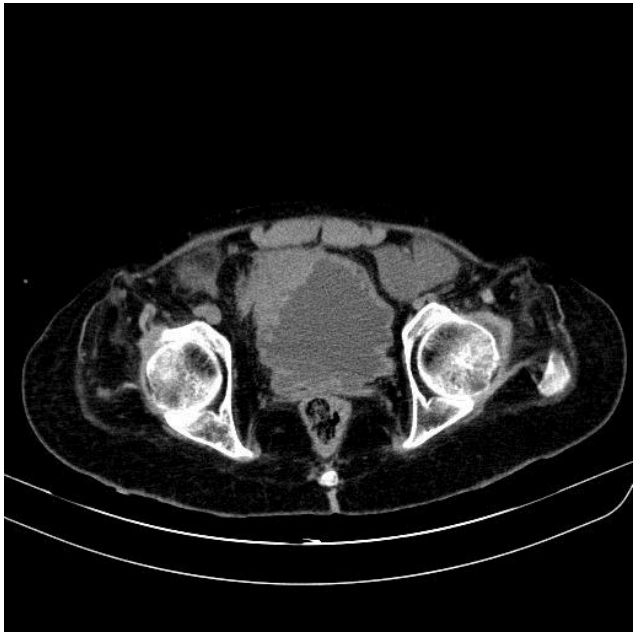
Treinamento/aperfeiçoamento de todos os envolvidos (abordagem da bacteriúria).

Abrams, P et al "A Proposed Guideline for the Urological Management of Patients with Spinal Cord Injury." *BJU Int* 101, no. 8 (April 2008)
Weld, Kyle J., and Roger R. Dmochowski. "Effect of Bladder Management on Urological Complications in Spinal Cord Injured Patients." *J Urol* 163, no. 3 (2000): 768–72.

Mnemônico - ICS

Diretrizes para o tratamento de pacientes com disfunção vesical neurogênica:

1. Preservação da função renal;
2. Minimizar infecções urinárias;
3. Maximizar a continência;


TRM, 31 anos, FAF T12-L1-L2

Sem seguimento, micção por transbordamento.

Incontinente, dilatação renal, cálculo vesical.

Mensagem Final

- A disfunção do trato urinário é extremamente comum em pacientes com neuropatia.
- Esta disfunção é importante causa de elevação de custos com a atenção médica, morbidade e mortalidade.
- Complicações podem ser evitadas com protocolos estruturados.

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Muito obrigado!

Cuidados Urológicos no Paciente com Doença Neurológica

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