



FACULTAT DE VETERINÀRIA DE BARCELONA

NEUROLOGY

TEACHERS

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OBJECTIVES

To provide the student the basic knowledge needed to recognize and handle a neurological clinical case. At the end of the course, each student should be able to: perform a complete neurological examination, localize a lesion in the nervous system, make a differential diagnosis list, and provide a list of diagnostic tests to perform, as well as a prognosis for each patient with a neurological problem.

PROGRAM

LECTURE SUBJECTS: *in ENGLISH*

1. Neurological examination, clinical history and prognosis. Neurological exam: observation (mental status, gait, posture), palpation, postural reactions (proprioception), spinal reflexes, cranial nerves, sensation. Lesion localization in the nervous system: intracranial – extracranial, brain – spinal cord – peripheral nervous system.
2. Diagnostic tests in clinical neurology. Clinical pathology (blood and CSF), neuroimaging (radiology, CT, MRI), electrophysiology.
3. Monoparesis. Lesion localization. Monoparesis of a thoracic or a pelvic limb. Specific diseases causing monoparesis. Diagnosis, treatment and prognosis.
4. Paraparesis. Lesion localization: T3-L3, L4-S3. Acute and chronic diseases affecting these spinal cord segments. Main disease categories and specific diseases: pathophysiology, diagnosis, treatment and prognosis.

5. Tetraparesis-hemiparesis. Lesion localization: C1-C5, C6-T2. Specific diseases affecting these spinal cord segments: acute and chronic. Diseases causing diffuse lower motor neuron (LMN) signs: radiculopathies, neuropathies, junctionopathies, myopathies.

6. Ataxia of the head and body. Lesion localization: vestibular and cerebellar diseases. Specific diseases affecting the vestibular system (peripheral or central) and the cerebellum. Pathophysiology, diagnosis, treatment and prognosis.

7. Craniocerebral trauma: pathophysiology and treatment.

PRACTICAL SESSIONS

A week of clinical practice in the Neurology/Neurosurgery Service of the Hospital Clínic Veterinari (HCV) de la UAB:

- **COMPULSORY** to pass the course
- Student groups: 4 students/week
- Follow up of hospitalized clinical neurology patients performed by the students with the neurology resident's supervision
- Assistance to: daily morning rounds, appointments, diagnostic procedures, and surgical treatments performed during the week by the neurology service personnel
- Other clinical activities as demanded depending on the Neurology Service case load of the week

COURSE STRUCTURE

The course is 3 credits (30h) worth, which will be distributed as follows:

- **Lectures** : approximately 9 hours of regular lecture teaching
- **Neurological cases**: resolution of video clinical cases previously seen and worked up by the students at home (approximately 6 hours)
- **HCV practical sessions**: compulsory for each student taking the course

IT IS ESSENTIAL THAT NEUROLOGY STUDENTS HAVE GOOD AND FRESH NEUROANATOMY KNOWLEDGE.

EVALUATION

- Clinical case resolution and work up during the course will provide the student with the knowledge and skills to resolve a final clinical case on his/her own
- Written test exam
- Week on clinics evaluation
- Each student's final score will be given through the separate evaluation of the three parts of the course

BIBLIOGRAPHY

In addition to the following books, other general texts on related subjects can not be forgotten (Internal Medicine, Surgery, Ophthalmology, Pathology, etc.)

- **Neurology**

LORENZ m, COATES J, KENT M (2010) Handbook of Veterinary Neurology. Elsevier

- **Small Animal Neurology**

BAGLEY RS (2005). Fundamentals of Veterinary Clinical Neurology. Blackwell publishing.

DEWEY CW (2008) A practical guide to Canine and Feline Neurology. 2nd edition. Wiley-Blackwell

LORENZ MD and KORNEGAY JN (2004) Handbook of Veterinary Neurology. 4th ed. Philadelphia, WB Saunders Co

BRAUND KG (2003) Clinical Syndromes in Veterinary Neurology. IVIS. ORG

CHRISMAN CL (1991) Problems in small animal Neurology. 2nd ed., Philadelphia, Lea & Febiger

CHRISMAN CL (2003) Neurology for the small animal practitioner, Jackson, WY, Teton New-Media.

HOERLEIN BF (1978) Canine Neurology. Diagnosis and Treatment. Philadelphia, WB Saunders Co

PLATT S, OLBY N (2004) Manual of Small Animal Neurology. London, British Small Animal Veterinary Association

WHEELER SJ i THOMAS WB (1996) Self assesment colour review of small animal Neurology. Manson Publishing. London.

- **Large Animal Neurology**

MAYHEW IG (2009) Large Animal Neurology. 2nd edition. Wiley-Blackwell

REED SM, BAYLY WM i SELLOON DC (2004) Equine Internal Medicine, 2nd ed., St. Louis, Missouri, Saunders (An imprint of Elsevier), Capítol 10

FURR M, REED S (2008) Equine Neurology, Oxford, Blackwell Publishing LTD

- **Neuroanatomy**

AIGÉ V (2001) Los nervios craneales del perro y del gato. Neuroanatomía y Neurología Clínica. Servei de Publicacions, UAB. Bellaterra (Barcelona).

AIGE V (1998) Neurología del perro y del gato. Ed. Pulso. Barcelona

DELAHUNTA A & GLASS E (2009) Veterinary Neuroanatomy and Clinical Neurology. 3rd ed., Philadelphia, WB Saunders Co

KING AS (1987) Physiological and Clinical Anatomy of the Domestic Animals. Oxford, Oxford University Press.

- **Atlas**

YOSHIKAWA T (1968) Atlas of the brains of domestic animals. University of Tokyo press, Tokyo,

PAXINOS G, WATSON C (1982) The rat brain in stereotaxic coordinates. Academic Press, London, 1982

- **Neurosurgery**

FOSSUM TW (2007), Small Animal Surgery, 3rd edition, St. Louis, Mosby Inc., Elsevier Science Co

SLATTER D (2002), Textbook of Small Animal Surgery, 3rd edition, Philadelphia, WB Saunders Co

SHARP NJ & WHEELER SJ (2005) Small animal spinal disorders: Diagnosis and Surgery, 2nd ed. Elsevier Mosby.

- **Neuropathology**

SUMMERS BA, CUMMINGS JF and DELAHUNTA A (1995) Veterinary neuropathology. Mosby ed., St. Louis

GREENFIELD'S NEUROPATHOLOGY (1997) Ed. DI Graham and PL Lantos, 6th ed., London, E. Arnold, 2 vols.

KOESTNER A. and HIGGINS R.J. (2002) Tumors of the nervous system. In: Tumors in domestic animals. D.J.Meuten Ed., Iowa State Press, pp. 697-738

JOURNALS

CANIS ET FELIS

Nº 6, desember 1993 (Neurology monography)

Nº 73, april 2005 (Neurosurgery monography)

THE VETERINARY CLINICS OF NORTH AMERICA.

Small Animal Practice:

Diseases of the Spine, 22 (4), 1992

Intracranial disease, 26 (4),

Common Neurologic Problems, 30 (1)

Management of Pain, 30 (7)

Neuromuscular diseases, 32 (1), 2002

Neuromuscular diseases II, 34 (6), 2004

Equine Practice

The equine head, 9 (1), 1993

Selected neurologic and muscular diseases, 13 (1),

1997

VIDEOS YOU HAVE IN THE LIBRARY

L'EXAMEN NEUROLÒGIC DEL GOS

EL EXAMEN NEUROLÓGICO

CALENDAR – 2011/2012

Tuesday, February 14th:

16.30h The neurological examination (SA)

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Tuesday, February 21st:

16.30h Lesion localization and differential diagnosis (SA)

17.30h Diagnostic tests in neurology (CDF)

Tuesday, February 28th:

16.30h Monoparesis (SA)

17.30h Videos: cases 1-2

Tuesday, March 6th:

16.30h Paraparesis (SA)

17.30h Videos: discussion of cases 1-2; presentation of cases 3-4

Tuesday, March 13th:

16.30h Tetraparesis-PNS (SA)

17.30h Videos: discussion of cases 3-4; presentation of cases 5-6

Tuesday, March 20th

16.30-17-30h Vestibular and cerebellar ataxia (SA)

17.30h Videos: discussion of cases 5-6; presentation of cases 7-8

Tuesday, March 27th

16.30h Cranioencephalic trauma (SA)

17:30h Videos: discussion of cases 7-8; presentation of cases 9-10

Tuesday, April 10th

16.30h discussion of cases 9 and 10

NOTE:

SA = Sònia Añor; CDF = Cristian de la Fuente