



**Centro
Riabilitativo
Veterinario**

Miglioriamo la qualità
della loro vita, nel rispetto
della loro natura.

RELATION



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A THERAPEUTIC APPROACH TO POLYRADICULAR NEURITIS
AS THE BASIS TO A STANDARD REHABILITATION PROGRAMME
FOR NEUROLOGICAL DISEASES IN DOGS:
RETROSPECTIVE STUDY

A golden retriever is sitting on a blue, wavy, textured surface that resembles a mat or a piece of fabric. The dog is looking towards the camera with a happy expression. The background is a light, neutral color.

POLYNEUROPATHIES

DISEASES THAT CONCERN DIFFERENT PERIPHERAL NERVES
SIMULTANEOUSLY WITH MORE INVOLVEMENT OF EFFERENT MOTOR
FIBERS THAN SENSORY FIBERS.

A golden retriever is sitting on a blue, wavy, patterned surface that resembles a dog's paw print or a textured mat. The dog is looking towards the camera with a happy expression. The background is a light, neutral color.

POLYNEUROPATHIES

- ✿ Motor deficit
- ✿ Ataxia and weakness
- ✿ Para/tetraplegy, paresis
- ✿ Decreased reflexes / absent reflexes
- ✿ Rapid muscle atrophy
- ✿ Hyperesthesia



POLYNEUROPATHIES

- ❖ Acute, subacute, or chronic evolution,
- ❖ Unknown aetiology
- ❖ Idiopathic syndrome, non specific autoimmune genesis

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POLYNEUROPATHIES

- ✿ Instrumental research:
- ✿ Biochemical test
- ✿ Cephaloraquidian liquid analysis
- ✿ Muscle biopsy



ACUTE IDIOPATHIC POLYRADICULAR NEURITIS (AICP)

- ❖ Idiopathic inflammatory disorder
- ❖ Involves axons myelin sheath till ventral roots
- ❖ Cats
- ❖ Autoimmune process
- ❖ Antigenic stimulus from raccoons saliva
- ❖ Immunitary reaction of myelin sheath and periferic nerves

AICP

- ✿ The origin of antigenic stimulus to not exposed animals is unknown
- ✿ Autoimmune process
 - viral
 - toxic
 - infective

AICP

- ❖ Identical syndrome
- ❖ Not exposed dogs and cats
- ❖ Coonhound paralysis
- ❖ Widest sense term of AICP
- ❖ Case with identic clinic disorders



POLYNEUROPATHIES

- ❖ ACIP (acute canine idiopathic polyneuropathy)
- ❖ Coonhound paralysis
- ❖ Guillain-Barré syndrome
- ❖ Northern America '54
- ❖ areas with racoons presence
- ❖ low incidence
- ❖ Acute paralysis
- ❖ Fast progression

Unknown aeziology in Europe, autoimmune reactions to bacterial and viral infections.

AICP

- ❖ Hyperacute insurgence
- ❖ MNI paresis or plegia
- ❖ Pelvic limbs
- ❖ Toracic limbs
- ❖ Tetraparesis/tetraplegy
- ❖ 10days from rancoon contact
- ❖ Sometimes within 72hr

AICP

- ❖ Aponia, disponia
- ❖ Facial weakness
- ❖ Respiratory apparatus involvement
- ❖ Intensive therapy
- ❖ Assisted ventilation
- ❖ Tracheotomy
- ❖ Death

RETROSPECTIVE STUDY

- ❖ July 2005/January 2012: 0,12% of cases
- ❖ Referent specialists
- ❖ Compared list:
 - Trinity, poodle, 10years, 9 kg,
 - Luna, wolfmix, 13 years, 27 kg,
 - Lucky, Belgian sheepdog, 12 years, 33 kg,
 - Joy, mix, 13 years, 16 kg,
 - Bruto, fox terrier, 9 years, Kg 13, dead
 - Talamo mix, 10aa, kg 20,dead

NEUROLOGICAL EXAMINATION

Laboratory tests

Cephaloraquidian liquid analysis

Tick disease

Hormone disorders



RETROSPECTIVE STUDY

- ❖ Analysis on 6 dogs affected by ACIP
- ❖ 4 of them under physiotherapy protocol
- ❖ 2 of them self-recovery



THERAPEUTIC APPROACH

- ✿ Those cases started a specific rehabilitative programme
- ✿ Medical agreement and supervision
- ✿ Methodologic, complete, standardized format



THERAPEUTIC APPROACH

- ❖ Daily sessions
- ❖ Massage: circulation, warm up, elasticity
- ❖ Reflex stimulation: Resistance, Repetition, active work, articular fluidity.

THERAPEUTIC APPROACH

- ❖ High sensibility
- ❖ Postural exercises passive/active:
 - sphinx,
 - irregular pushes,
 - equilibrium maintenance
 - semisternale up & down
 - snacks





THERAPEUTIC APPROACH

❖ Weightbearing exercises:

- continuous stimulus
- weight distribution
- limbs replacement
- tickle and pinches

Essential to vary stimulus to allow them search their own strength and equilibrium, to receive an instinctive, continuous and active response



PHYSIOROLL AND ROCKERBOARD

- ✦ Equilibrium research
- ✦ Proprioceptive recovery

- ✦ A game of body weight distribution
- ✦ Confidence with their own

A golden retriever is sitting on a blue, wavy mesh surface that resembles a dog bed or a specialized mat. The dog is looking towards the camera with a happy expression. The background is a light, neutral color.

THERAPEUTIC APPROACH

- ❖ Extremely irritable patient due to hyperesthesia
- ❖ irritability guarantees reactions

- ❖ Respect of their mood and pain due to weather and weakness

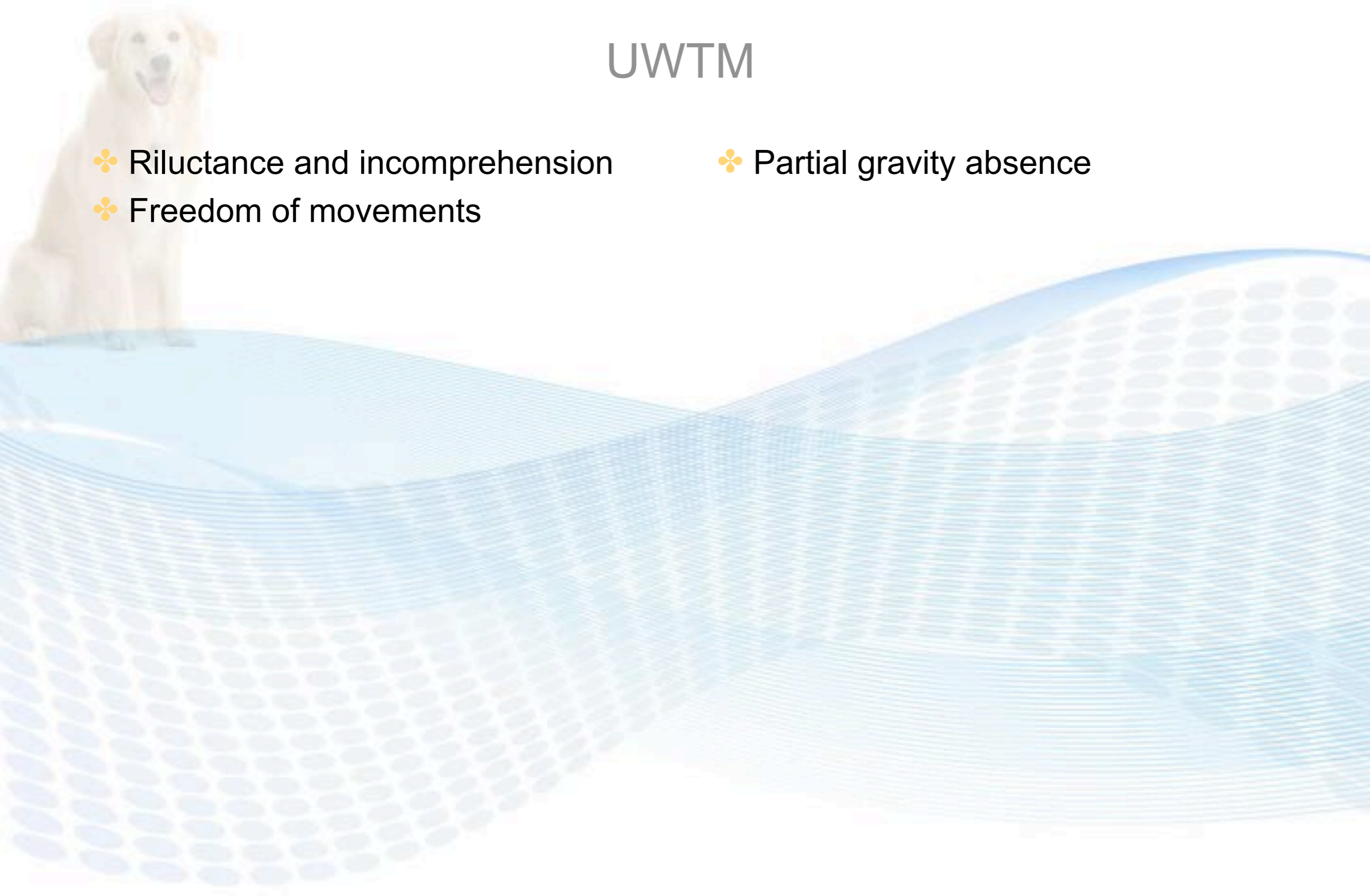
UWTM

- ❖ Never in 1° session
- ❖ from 6'(2'+2'+2') to 25'(10'+5'+10') with speed ramps

UWTM

- ❖ Riluctance and incomprehension
- ❖ Freedom of movements

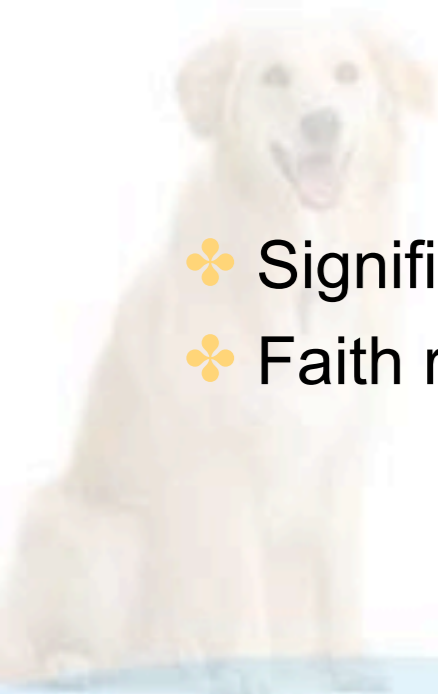
- ❖ Partial gravity absence



UWTM

- ❖ Significant muscles activity
- ❖ Faith regain

- ❖ Happy and jolly stimulous, owner



ACTIVE EXERCISES

- ❖ At $\frac{3}{4}$ recovery programme UWTM vs Tapis roulant
- ❖ Hurdles from 0 to 20cm max

- ❖ Slalom and 8 exercises
- ❖ Coordination and movement control

MODALITIES

- ❖ E-stim to optimized muscle tone regain
- ❖ Magnetic therapy for collateral articular pain



THERAPEUTIC PROTOCOL

- ❖ Daily session 1 – 2h
- ❖ Emotional active stimulus(food, toys)
- ❖ High spirit!
- ❖ Assisted therapeutic walk till the gradual recovery is obtained

THERAPEUTIC PROTOCOL

- ❖ Owner sensitization, motivation, involvement, to a daily continuous, active, home management!!!
- ❖ A deep experience in to the animal knowledge
- ❖ Vital stimulus:
 - Food
 - Love
 - Prey
 - Sex

A golden retriever is sitting on a blue, textured mesh surface that resembles a medical mat. The dog is looking towards the camera with a happy expression. The background is a light blue gradient with a subtle pattern of small circles.

GOALS

- ❖ Better recovery guarranty
- ❖ Reduction of recovery time
- ❖ Prevention of complications (bedsores, depression, etcetera)
- ❖ Protocol standardization



RESEARCH

LUNA E LUCKY: ELECTROMYOGRAPHY

=

AICP Diagnosis

TRINITY E JOY: POSITIVE TO HEMOPARASITIC

=

polyneuropathy diagnosis
identical AICP symptoms

TIME STUDY

- ❖ Luna: 70 days - 27 sessions
- ❖ Lucky: 59 days - 19 sessions
due to older age and the higher weight
- ❖ Trinity: 20 days - 7 sessions
- ❖ Joy: 42 days - 12 sessions (assisted ventilation)
Both arrived in worst conditions, initial recovery

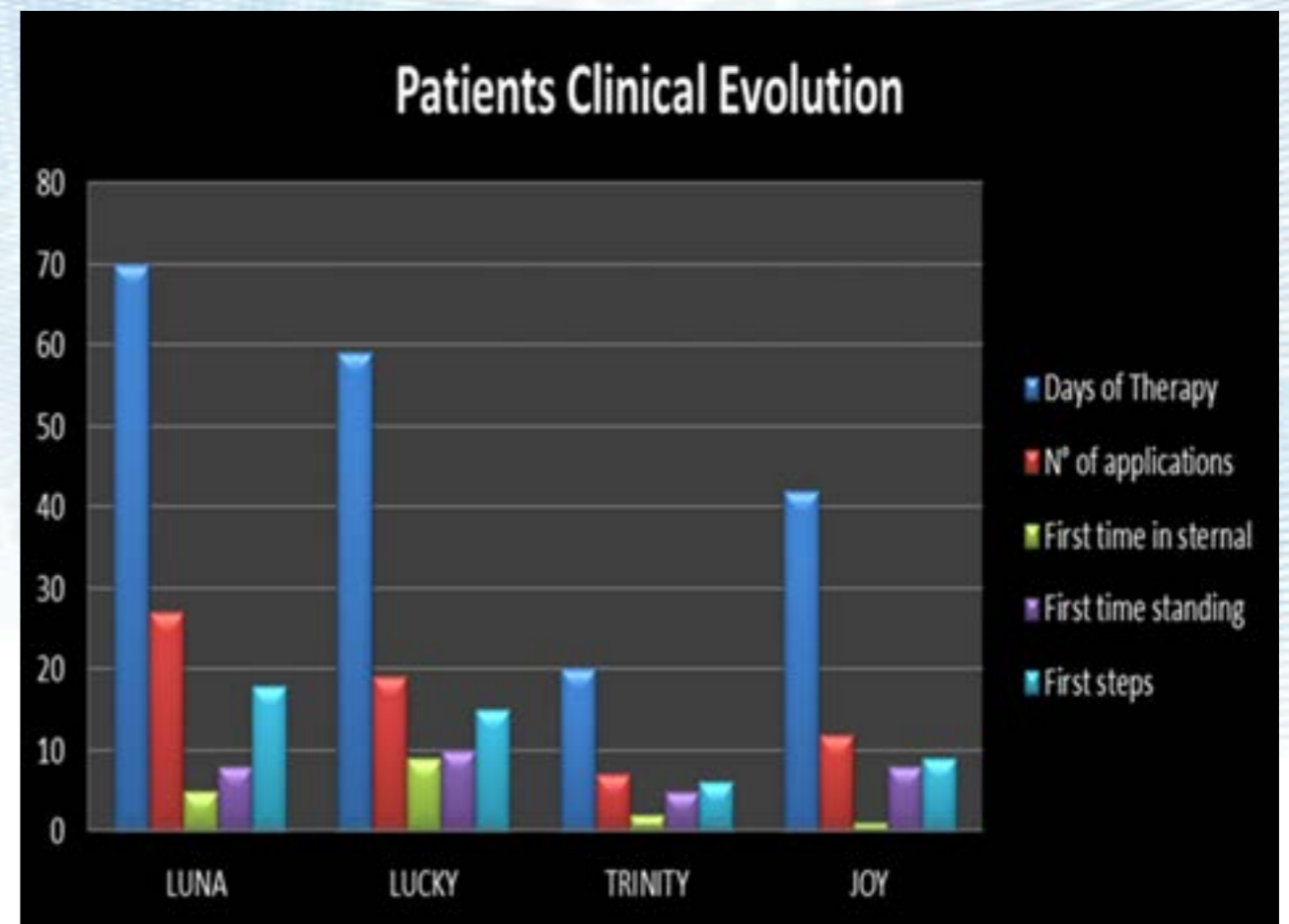
TIME STUDY

Standing maintenance

- ❖ Luna 8° session
- ❖ Lucky 10° session
- ❖ Trinity 5° session, relatively delay
- ❖ Joy 8° session, relatively delay

Deambulation skill

- ❖ Luna 18° session
- ❖ Lucky 15° session
- ❖ Trinity 6° session
- ❖ Joy 9° session





CONTROL METHODS

- ❖ Muscle circumferences (from 0,5 cm to 1 cm per month trophism increment)
- ❖ Semi-sternal and sternal position obtaining
- ❖ Stance reaching and maintainance
- ❖ Assisted deambulation
- ❖ Self-deambulation

GOALS

Evaluation of the effects to prove:

- ❖ major recovery success
- ❖ Shorter recovery timing
- ❖ Prevent complications (decubitus, depression)
- ❖ Owner discouragement;
- ❖ most complete protocol standardization

DATA ANALYSIS

- ❖ Data compared to control group
- ❖ Bruto and Talamo without clinic therapeutic program
- ❖ 1° session: as much info as possible about home management and therapeutic exercises
- ❖ Invited to frequent check up (once each one)
- ❖ Self management



EXAMINATION

- ❖ 4 examined patients they got back to their condition
- ❖ In between 2 and 6 months after the therapy none relapse
- ❖ Lucky hit by car 1month ago!
- ❖ Bruto cardiac arrest 3weeks
- ❖ Talamo killed 15 days



CONCLUSIONS

- ❖ The therapeutic protocol revealed excellent outcomes of time and degree
- ❖ It's necessary to proceed with an extended study on a bigger number of dogs to better evaluate and increase the efficiency of the proposed therapeutic protocol.



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