

'BUIATRICS': Origin and Evolution

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In conversations between anglophone veterinarians and colleagues of other linguistic roots, the former may show some reluctance to use or even to articulate the word 'buiatrics', although the *World Association for Buiatrics** (WAB) held international congresses in **Philadelphia** (1970), **London** (1972) and **Dublin** (1986) with a large attendance of British, North-American, and Irish cattle veterinarians. Is that hesitation due to unawareness, or just because three vowels in series seem irksome to pronounce? In order to further mutually understanding and to promote the acceptance of this term, the editor of *The Bovine Practitioner** invited the author to explain the derivation of 'buiatrics', and to review the development of this traditionally important branch of veterinary art.

'**Buiatrics**' stems from the Greek words βους (pronounced: boús), for *cattle*, and ιατρική (pronounced: iatrikhé), for *art of healing*. It literally signifies the *art of curing (sick) cattle*. Most veterinarians are well acquainted with other expressions of analogical composition, namely 'Hippiatrics' (i.e. the art of curing sick horses), or similar definitions of human medicine, as 'Pediatrics' (medical art for children), 'Geriatrics' (medical art for old people), or 'Psychiatry' (diagnosis and treatment of mental disorders, etc). The modern acceptance of *buiatrics* implies the *entire art of medicine, surgery and theriogenology for cattle, including appropriate prevention and management*, and thus covers a broad field of scientific research (applied pathophysiology, microbiology, parasitology, toxicology, laboratory techniques, environmental control, etc.) and practical experience (individual care and herd health programming for dairy and beef cattle, wild and zoo ruminants).

In pre-historic time, primitive knowledge about cattle diseases and their treatment probably existed since early domestication of the bovine species. First preserved documents showing cattle serving man in agriculture are Scandinavian and pre-Roman stone-gravings dating from the bronze age (Figure 1).

The old Egyptians (3500 - 672 B.C.) were rather experienced in dealing with large ruminants (Figure 2) and moreover worshipped them. Capture, roping, cast-

ing (Figure 3), bovine obstetrics (Figure 4), castration, dehorning, post-mortem inspection of sacrificed animals' carcasses (a pre-cursor of meat-inspection), and the administration of medicaments to cattle (Figure 5) have been passed on to our days by impressing pictures. The **Kahun papyrus** (about 1900 B.C.) reports about ocular diseases, colics and bloat in cattle. The plagues, as described in the Old Testament, comprised - besides diseases of other animal species - epizootics affecting domestic cattle.

Figure 1. Draught cattle pulling plow (middle) and harrow (right) on Ligurian (Italy) rock gravings dating from the Bronze Age.

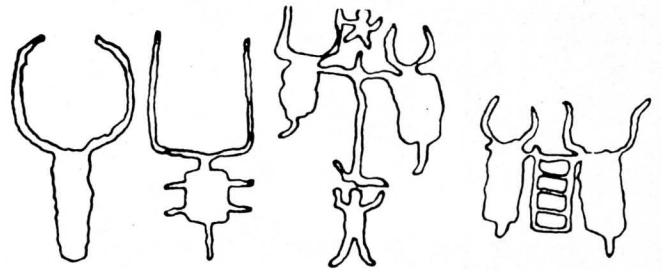
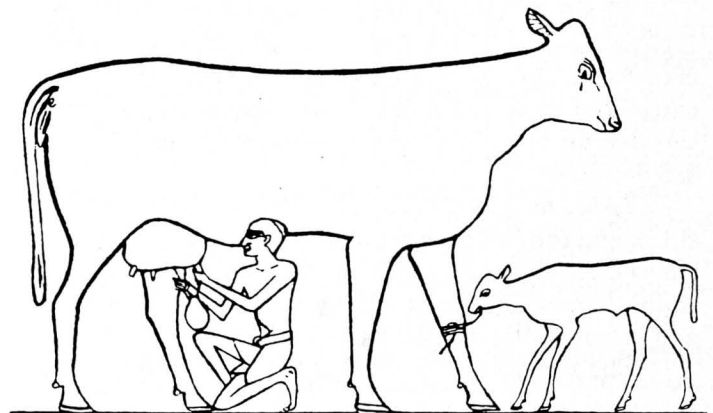


Figure 2. Egyptian representation (~ 4000 B.C.) showing handmilking of a heifer in the presence of her calf (to secure the 'letdown' of milk)



*THE BOVINE PRACTITIONER is also the official journal of the WORLD ASSOCIATION FOR BUIATRICS (WAB). Prof. Dr. Stöber is a past Secretary of WAB and now Honorary Secretary.

Figure 3. Casting of a bovine animal by rope (Egypt; Tomb of Ti; 2450 B.C.)

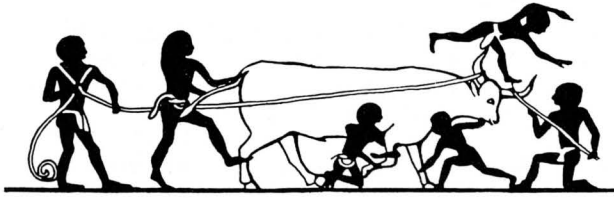


Figure 4. Obstetrical instruction given by a 'veterinarian' to the performing farmer (Egypt; ~ 2000 B.C.)

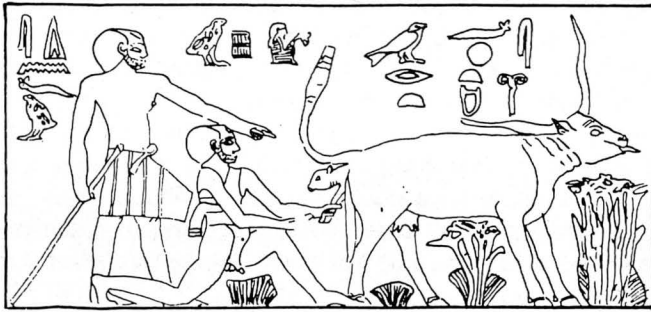
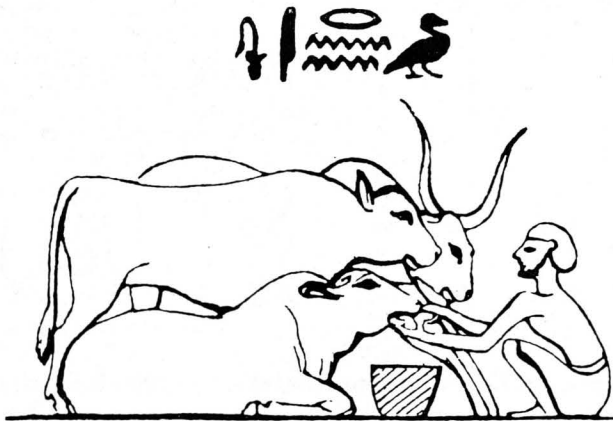


Figure 5. Administration of a 'medicament' to a sick ox (Egypt; ~ 2000 B.C.)



The *Babylonian Codex Hammurabi* (about 2200 B.C.) mentions for the first time in writing the 'physician for cattle'. In this document, several diseases of cattle and some penal provisions (regulating indemnities due for injuries or damages caused to or by cattle) are detailed.

Israelites (1500 - 772 B.C.), *Carthagians* (900 - 146 B.C.), and the *Indian Vedes* (1900 - 800 B.C.) were experienced in different methods for castrating bulls; in India, homes for the providing of merciful care to old and infirm cattle existed from 500 B.C.

The *Greeks* (1200 - 323 B.C.) knew about conta-

gious pleuropneumonia, fever, vomiting, choke, prestomachal indigestion, cough, claw affections, wounds, abscesses, mange, cattle-lice and warble infestation; however, herdsmen and physicians for cattle ('βου-χολος' = βούκολός, and 'βου-ιατρος' = βούιατρός, respectively) apparently had rather limited knowledge about causes and effective treatment of these and other bovine diseases.

In the old 'cattle country' *Italy* (500 B.C. - 476 A.C.), draught oxen ('ιταλος' = italos) were the main labour animals. 'Bubulcus' (cattle herdsman) and 'medicus pecuarius' (cattle physician) were expected to be skilled in treating sick cattle ('curae boum'). The Romans knew about the contagiousity of various cattle epizootics named - among others - 'pestilentia', 'maleus', 'verago' and 'morbus alienatus', and advised farmers to separate diseased as well as presumably infected animals from the healthy ones. Moreover, their writers quote emaciation, weakness, fever, udder edema, heart pain, inappetence, indigestion, bloat, abdominal gripes and scours as sporadic bovine ailments, recommending dietary measures and the administration of medicaments by mouth, nose or ear. Among parasites of large ruminants, they knew warbles and gastro-intestinal worms. Roman reports also show that surgical interventions - like firing, cutting, suturing of wounds, treatment and dressing of claws - were already performed in those days, using - if necessary - a stanchion ('tormentum'), and that cattle production in general was held in high esteem.

In the *Middle Ages and thereafter* (800 - 1700 A.C.), terrible epizootics (rinderpest, contagious pleuropneumonia, foot-and-mouth disease, anthrax) repeatedly ravaged the cattle population of Europe and often entailed gross famine (Figure 6). In that period, the attention for diseased livestock was almost exclusively devolved on the members of less respected classes, like herdsmen, peasants, knackers, and hangmen. Experiences gathered in treating sick cattle were written down in so-called 'house-books'; later on, these family notes (and longterm 'weather-forecasts') were transferred into various widespread 'calendars for farmers' (Figure 7). Besides primitive empirism, however, mysticism and superstition characterized medieval medicine for ailing cattle; by way of example, 'conjuring away', amulets, charms, 'emergency fires', and animal sacrifices were commonly used to prevent dreaded witchery, then considered to be the main cause of livestock illness and losses. Later on, these practices were taken over in modified form, for instance as livestock blessings, supplicative prayer processions, votive gifts and animal models (Figure 8), by the Christian Church.

After the *Thirty Years' War*, an increasing proportion of human physicians and parsons got engaged in the instruction of rural people, especially for the con-

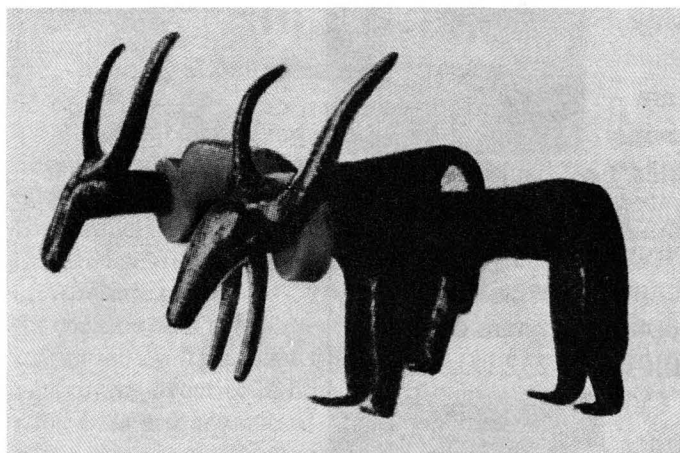
Figure 6. Dutch farmers deploring heavy losses of cattle due to rinderpest (1745)



Figure 7. Instruction for the orderly use of a trocar for the relief of bloat ('Common Calendar for Farmers', Germany; 1791)



Figure 8. Iron medieval votive oxen model from Carinthia, Austria.



trolling of rinderpest, as a result of the insufficient competence of 'cow-doctors' and 'ox-leeches' (Figure 9) for the 'cure' of sick cattle. The need for well-trained veterinarians with thorough experience in the treatment of bovine patients grew more and more pressing. Thus, besides the aim to educate qualified horse-veterinarians for the demands of the army, cattle plagues, especially rinderpest, were the main motive for the creation of

veterinary schools; among them, those located in cattle-breeding areas (for example the schools in Toulouse, France, and Berne, Switzerland) devoted their activities from the outset particularly to cattle diseases. However, for economic reasons, the lack of appropriate barns in the schools' clinics, and the transport problems, sick cattle were only rarely hospitalized; usually, they were examined and treated by an extern or ambulatory service, called 'Cattle-clinic' in Stuttgart, Germany, or 'Buiatrical policlinic' in Berne, Switzerland.

Figure 9. 'Cow-Doctor' (or 'ox-leech') as seen in the pioneer period of the United States of America (Smithcors, 1963)



During the *second half of the 19th century*, an intensive progress in all branches of buiatrics was brought into action thanks to the untiring work of the leaders of these ambulatoric clinics and of many veterinarians engaged in cattle practice; consequently, importance and prestige of the latter increased rapidly. This development found expression in special periodicals, textbooks and monographs which appeared here and there; among them, the book on 'Buiatrics' written by RYCHNER (Berne, 1835) merits mention in the context of this study.

Due to increasing motorization, horses lost their paramount importance among domestic animals during the first half of the 20th century, whereas cattle, the productivity of which had been considerably improved within the previous 200 years, rose to the first rank. Simultaneously, transport problems and economic objections concerning the hospitalization of cattle in veterinary clinics diminished. Thus, teaching hospitals specialized for this purpose were established in Vienna, Austria (1912), Hannover, Germany (1925), and

Stockholm, Sweden (1927). Buiatrical research and the 'bed-side' -training of veterinary students in the presence of diseased cattle were essentially improved by these foundations.

Within the *last decades*, knowledge about cattle diseases (etiology, pathogenesis, symptomatology, diagnosis, therapy and prevention) have been rapidly deepened and broadened. After considering first and inevitably the ravageous epizootic diseases of cattle, appropriate clinical examination techniques were developed. Surgical procedures were elaborated for affections needing operative intervention (rumenotomy, claw amputation, resection of intestine, omentopexy for relief of abomasal displacement, etc.). Contagious bovine diseases endangering the health of man (like tuberculosis and brucellosis) are nearly eradicated all over the world today. Others (for instance bovine spongiform encephalopathy) arose in the meantime and contribute to the continuing demand for competent cattle veterinarians or 'buiatrists'. Formation and training of

such specialists is therefore actually an important item within the scope of nearly all national veterinary associations.

One deciding step in this direction was the creation by K. DIERNHOFER, G. ROSENBERGER and H. -CHR. BENDIXEN of the *World Association for Buiatrics* in Vienna, Austria in 1962: Its biannual Congresses were then and now combined with the Congress of the host National Group of Cattle Veterinarians and are known to range over the wide field of buiatrics as described in this contribution.


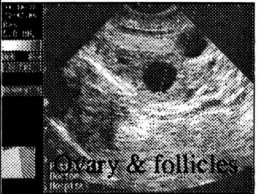
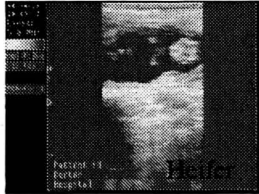
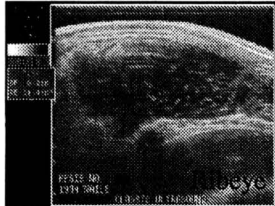
References

J. Smithcors, Evolution of the veterinary art, a narration account to 1850. Baillière, Tindall & Cox, London (1958). M. Stöber: Überblick über die Geschichte der Buiatrik. Berliner Münchener Tierärztl. Wschr. 78, 461-465 (1965). M. Stöber, H. Scholz & P. Lekeux: Tasks, structure and development of the World Association for Buiatrics (in German). Proc. Congr. World Assoc. for Buiatrics, Salvador, Bahia 16, 116-124 (1990).

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