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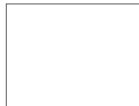
Country: Germany (Soviet Zone)

Subject: Antibiotics - Xanthocillin



50X1

Place Acquired by Source:



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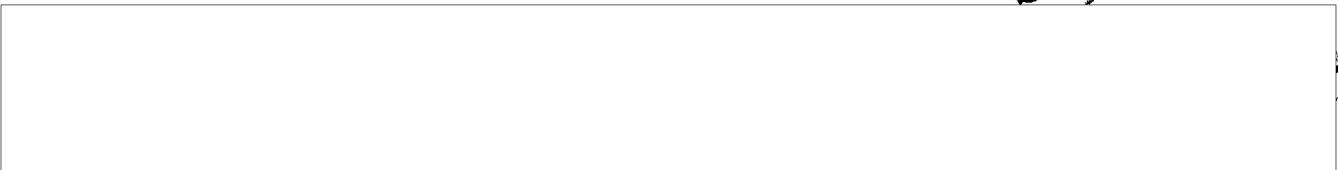
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Date of Information: May 1953

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1. Xanthocillin is a new antibiotic which is obtained in crystalline purity from the mycelium of a special breed of penicillium notatum. It was discovered in 1948 at Friedrich Schiller University in Jena. The chemical analysis of the substance has not yet been completed. On the basis of favorable hypotheses, xanthocillin is preferred for local treatment of bacterial infections of various sorts, whereas it is not suited for enteral or parenteral general treatment. The following characteristics may be mentioned:
2. Polyvalent Effect, Bacteriostatic and Bactericidal
cf. Efficiency Spectrum of Xanthocillin in vitro (at end of report).
In addition to staphylococci, streptococci, diphtheria bacteria, and other gram-positive germs, highly diluted xanthocillin arrests also such gram-negative germs insensitive to penicillin as proteus, pyocyaneus, coli, among others, as well as tubercle bacteria and such anaerobic spore producers as tetanus, gas-gangrene, and symptomatic-anthrax bacilli. Thus, xanthocillin's antibiotic effect can be extended to practically all germs which cause local infection or which can be seized by prophylactic wound treatment. Not only does xanthocillin arrest germs, but in considerably high dilution it even kills germs.
3. No Resistance Development A serious and constantly increasing danger to the reliability of sulfonamides and antibiotics is presented by the fact that the pathogenic germs are developing resistance to these medicaments. The experiment to accustom 50 different germs in vitro to xanthocillin through daily treatment with subliminal doses has to date been unsuccessful. Whereas hemolytic staphylococci doubled and quadrupled their resistance to sulfonamides and penicillin on the 6th-12th day, these same germs showed no increase in resistance to xanthocillin even on the 100th day or later. Against sulfonamide and penicillin, the germs had developed total resistance on the 50th-60th day. Those germs which experimentally had become resistant to sulfonamide or penicillin, fully retained their sensitivity to xanthocillin. On the basis of these results and considering the experiences with other antibiotics, it may be concluded that also under clinical conditions development of resistance against xanthocillin may practically be ruled out.

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4. Natural Retarding Action Depotwirkung Xanthocillin is relatively not easily soluble. On the one hand, this characteristic is an obstacle to the production of injection preparations with sufficient absorption capacity suitable for general treatment; on the other hand, for local therapy, however, this characteristic has the advantage of slow absorption and natural retarding action.
5. Stability Xanthocillin is extensively stable toward chemicals, and is entirely thermostable. In watery suspension, xanthocillin may be heated one hour to 120° without adverse effects. The preparations may be stored for an unlimited length of time without any loss of effectiveness. Even when other remedies, e. g. disinfectants or chemotherapeutics, were used during xanthocillin therapy, there was noticed no unfavorable effect on the antibiotic action of the xanthocillin.
6. Therapeutic Effect Clinical tests on 17,000 patients to date have shown that all xanthocillin preparations are very well tolerated. The therapeutic effect of xanthocillin is based not only on its antibiotic characteristic, but clearly also on its capacity to cleanse wounds and promote granulation.
7. Xanthocillin's Therapeutic Significance Because of xanthocillin's extensive polyvalent effect, therapeutic success may be expected for xanthocillin preparations principally in all cases of bacterial infection which can be treated locally. Such polyvalent effect is particularly advantageous in the treatment of mixed infections and in prophylactic care of wounds. Should in certain cases-- e.g. not easily accessible seats of infection -- the xanthocillin be ineffective or fail, there is no fear that during continuous treatment the germs will develop resistance through subliminal doses, as is known to be the case in treatment with penicillin, streptomycin, or sulfonamides. Local treatment with xanthocillin instead of local applications of penicillin, streptomycin, or sulfonamides also counteracts the multiplication and spread of breeds resistant to penicillin, streptomycin, or sulfonamides, and thus furthers the reliable effect of these medicaments so important for general treatment. This applies also to the development of allergies to penicillin, streptomycin, and sulfonamides -- allergies which are traced to the application of the listed medicaments in great quantities, especially on the skin and mucous membranes. It is this supplementing quality to the antibiotics and sulfonamides suitable for parenteral and peroral general treatment which gives xanthocillin its importance as a specific local therapeutic.

8. Commercial Forms and Indication:Xanthocillin Ointment

10-gram and 30-gram aluminum tubes
100-gram glass container

| | |
|---------------------------|-------|
| Xanthocillin | |
| Ol. pedum tauri | 0.2 |
| <u>neat's-foot oil?</u> | 27.0 |
| Nonirritant ointment base | 100.0 |

For treatment of infected wounds and sores, especially ulcera cruris, phlegmon, impetigo, folliculitis, pyoderma, infected eczema, pemphigus neonatorum, burns, rhagades, mastitis lactantium. The ointment is to be applied once or twice daily, and is to be covered with a bandage.

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8. (continued)

Xanthocillin Wound Powder

| | | |
|---------------------------------------|-----------------|-------|
| 10-gram and 50-gram shaker containers | Xanthocillin | 0.5 |
| 7-gram glass flasket | Sacch. lact. ad | 100.0 |

For wound care and infection prophylaxis in small and large surgery. For treatment of dermatological, otological, and other infections (cf. indication for xanthocillin ointment). In the treatment of wounds, abscesses, sores, and burns, the powder should best be used in combination with the xanthocillin ointment; in case of heavy secretion, use xanthocillin powder. The powder is to be applied once or twice daily, and is to be covered with a bandage.

Xanthocillin Wound Powder Forte

| | | |
|----------------------|-----------------|-------|
| 7-gram glass flasket | Xanthocillin | 5.0 |
| | Sacch. lact. ad | 100.0 |

For treatment of spatially limited, highly infected wounds, especially in dental and jaw surgery.

Xanthocillin Wound Cones

| | | |
|--------------------------|-------------------------------------------|-------|
| 50-cone tube | Xanthocillin | 5 mg |
| 200-cone glass container | Sacch. lact. with 2% swelling agent ad | 50 mg |

Xanthocillin Wound Cones with Anaesthesin

| | | |
|--------------------------|-------------------------------------------|-------|
| 50-cone tube | Xanthocillin | 5 mg |
| 200-cone glass container | Anaesthesin | 3 mg |
| | Sacch. lact. with 2% swelling agent ad | 50 mg |

Microstyli for insertion into the alveoli after extractions, in case of surgery, dental root resection, osteomyelitis; for insertion into fistulae, furuncles, carbuncles, abscesses, ulcers, and panaritia (possibly after puncture). 1-3 xanthocillin wound cones are to be inserted, depending on the size of the alveolus or operation wound.

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8. (continued)

Xanthocillin Eye Ointment

| | | |
|-------------------------|-------------------------|-------|
| 10-gram glass container | Xanthocillin | 0.2 |
| | Special eye ointment ad | 100.0 |

Xanthocillin Eye Oil

| | | |
|----------------|-------------------------------------------------|-------|
| 8-gram flasket | Xanthocillin | 0.4 |
| | Vegetable oil (purified) with emulsifier ad. | 100.0 |

To be used in case of blepharitis, conjunctivitis, keratitis including corneal ulcers and cornea infiltrations, blennorrhoea, infectious dacryocysts, injuries and burns; also for prophylaxis and postoperative treatment. The ointment and the oil are to be applied once or twice daily.

Bibliography /See original document for authors and German titles/

Efficiency Spectrum of Xanthocillin in vitro

| Tested Exciter | Xanthocillin Dilutions | Nourishing Solution |
|----------------------------------------------|------------------------|---------------------|
| Hemolytic staphylococci | | |
| Hemolytic streptococci | | |
| Diphtheria bacteria | | |
| Coli bacteria | | |
| Proteus group | | |
| Pyocyanus and fluorescence bacteria | | |
| Tetanus bacilli | | |
| Gas-gangrene and symptomatic-anthrax bacilli | | |
| Gonococci | | |
| Tubercle bacteria | | |

Proved extreme value of arrest

B - Test in bouillon

Bacteriostatic mean value after 18 hours

KB - Test in coke bouillon

Bactericidal mean value after 18 hours

/Koksbouillon/

S8 (or S33) - Test in 8 (or 33)% serum

VEB Medicaments Plant Dresden

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