

The Use Of A Readily Available Vegetable Material In The Treatment Of The Arthritides

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IN the spring of 1949, a colleague brought to my attention a concentrated preparation of the domesticated mushroom (*Agaricus Campestris*) which he had given to a few patients suffering from arthritis who appeared to be relieved of the symptomatology of their disease. The material had been previously tested on rats, utilizing many times the maximum dosage proposed for human consumption, without evidence of toxicity. Inasmuch as the substance itself had been used as an item of dietary over the centuries, it appeared to me satisfactory for clinical investigation.

The material studied is a low temperature concentrate from the mushroom compressed into an oral tablet. Each tablet of 7½ grains represents approximately 150 grains of fresh substance.

The first patient to receive the experimental material was a 54-year old dentist with extensive proliferative arthritis involving the hands, shoulders, knees, feet, ankles, hips and spine with fusion from the third cervical to the sacrum. He had been obliged to give up his practice five years before, being unable to close his hands, and could move about only with the help of two canes. He suffered excruciating pain. For a month before he began to take the mushroom tablets, he had been placed on a high protein diet, crude adrenal cortex, Wulzen factor, and 10 grains of aspirin as needed. He had made general improvement in nutrition and a slight change in the motility of the extremities. He began using 9 mushroom tablets daily. Within a week, he had less nocturnal pain and was experiencing a noticeable improvement in motility of the hands. For two months, he was maintained on 9 tablets daily, making steady gain in strength, walking as far as a mile and a half a day, discarding one cane, and noting less and less pain. His sedimentation rate dropped from 104 mm. in one hour to 47 mm. in one hour, his red count went from 4,200,000 to 4,800,000. It was decided to boost the dosage of mushroom tablets to 36 daily in order to ascertain if a higher dosage would result in any dramatic change. This was continued for 2½ months, during which he made marked progress. He regained motility of both hands, lost pain in all joints, and was able to rotate his neck approximately 80

degrees. He resumed the practice of dentistry on a half day schedule. He continued to use the mushroom tablets, gradually reducing the dosage to 6 daily until the present, 11 months later.

We have studied the effect of the mushroom tablets on 10 cases of proliferative arthritis, 10 of degenerative arthritis, and 2 cases of gouty arthritis.

All patients studied had had a thorough physical examination, routine laboratory studies, six-foot X-rays of the hand, foot, AP and lateral of the skull and the chest. In several cases, six-foot X-rays of the specific joint giving the most pain were made for comparative studies. All patients were placed on a high-protein, high-fat, relatively low-carbohydrate diet.

A summary of the 20 cases studied will follow:

We also treated two cases of gout with the mushroom therapy. Our sole purpose in one case was to treat an acute attack in a 44-year old male with inflammation in the great toes, knees and elbows. He was given 30 tablets daily for three days, and 18 tablets a day for 6 days. He obtained complete relief from the acute attack. A 61-year-old female who suffered from gout in the feet, knees, hands and shoulders, received 27 tablets daily for six months. She noted marked increase in strength within two weeks. During the six months she received the experimental material, her blood pressure dropped from 220/110 to 160/120, she became free of her nocturnal pain and was able to sleep in comfort. She gradually increased her walking from a few feet to 1½ miles, which she did without any pain.

In summary, our clinical observations would indicate that the mushroom therapy had marked value to 7 out of the 10 cases of degenerative arthritis. These experienced less pain and greater motility. Two cases experienced a notable drop in elevated blood pressure. Three of this group of patients had an unusual sense of well being. The 82-year old male who made the recovery from a thrombosis of the foot and continued to take medication received a boost in his energy, his motility and freedom from pain.

Less benefit from the mushroom therapy accrued to the patients suffering from proliferative

(Read before the American Therapeutic Society, April 14, 1950,
Boston, Mass.)

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Summary of 10 Cases of Proliferative Arthritis Before Treatment With Experimental Therapy

Case No.	Sex	Age	Duration of Illness	Joints Involved	Time Observed on Preliminary Treatment	Results
14148	M	54	19 years	Cervical spine, right knee, left shoulder, left jaw, hands.	3 months	None
13350	F	48	8 years	Feet, ankles, knees, hands, elbows, wrists, jaws, cervical vertebrae.	2 years	Gain of 17 lbs. Improvement in strength.
13888	F	48	6 years	Hands, feet, knees, hips, elbows, shoulders.	10 months	Persistent anemia controlled, improved nutrition.
14113	M	54	25 years	Left hip, ankles, shoulders, hands, fusion of spine, 3rd cervical to sacrum.	1 months	Slight improvement in motility of extremities.
13960	F	45	12 years	Jaws, hands, wrists, fingers, elbows, shoulders, neck, knees, ankles, feet.	9 months	Improved tissue, tone.
13696	F	32	10 months	Cervical spine.	10 months	None
13932	F	70	50 years	Fingers, wrists, ankles, knees, hips, feet, jaws, spine.	5 months	None
12973	F	50	Acute onset	Hands, feet, knees.	None	None
14241	M	48	15 years	Thoracic vertebrae to 2nd cervical fused; shoulders knees, hips.	1 week	None
14463	F	58	17 years	Ankles, feet, knees, hands, wrists, left elbow.	None	None

Summary of Use of Mushroom Therapy on 10 Cases of Proliferative Arthritis

Case No.	Dosage	Length of time on therapy	Time 1st change noted	Nature of change	Side Effects	Progress
14148	9 daily	6 months	1 month	Relief of pain	Temporary shift of pain from joint to muscle	Good
13350	32 daily	4 months	2 weeks	Increased motility and increased circulation	Initial insecurity of feet	General increase in motility of extremities
13888	25 daily	4 months	2 weeks	Less pain	Temporary shift of pain from joint to muscle	Initial improvement, then relapse into former symptoms
14113	9 to 36 daily	11 months	1 week	Less nocturnal pain	None	Excellent, regained complete motility of extremities, lost all pain, returned to practice of dentistry
13960	32 daily	7 months	2 weeks	Improved motility	Temporary shift in pain from joint to muscle	Severe influenza caused return of all arthritic symptoms, patient too discouraged to continue therapy
13696	27 daily	3 months	1 week	Less pain	None	Lessened pain, improved motility
13932	32 daily	6 months	1 month	Improved motility, relief of pain	None	Made substantial improvement
12973	9 daily	8 months	2 weeks	Able to close hands	Temporary shift of pain from joint to muscle	Good
14241	36 daily	3 weeks	4 days	Psychic outlook improved	None	Blood pressure dropped, sedimentation rate dropped, hemoglobin improved
14463	36 daily	1 month	3 days	Less pain	None	Less pain; discontinued because progress was not more rapid

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Summary of 10 Cases of Degenerative Arthritis Before Treatment With Experimental Therapy

Case No.	Sex	Age	Duration of Illness	Joints Involved	Time Observed on Preliminary Treatment	Results
14142	F	58	10 years	Right and left knees, hands, shoulders	4 months	Improved nutrition.
13699	F	59	19 years	Knees, right wrist, left shoulder, ankles, hands	16 months	General improvement until severe intercurrent illness.
14034	F	59	1 years	Feet, right hand, and cervical spine	7 months	None
14352	F	78	9 years	Dorsal spine, hands and feet	3 months	Gain weight,
14378	M	43	9 months	Left knee, left ankle, left hip	None	_____
14464	M	54	15 years	Feet, knees, hips, hands, wrists, shoulders, left elbow, dorsal spine	None	_____
14217	M	57	2 years	Cervical spine, hands, elbows, shoulders	1 month	Improved nutrition.
13648	M	66	7 years	Right hip, knees, shoulders, left ankle, left elbow	16 months	Improved locomotion, nutrition, drop in BP from 160/92 to 148/88.
12138	M	82	13 years	Ankles, knees, hands, feet, elbows, shoulders, lumbar & dorsal spines	6 years	Great improvement in motility and control of pain.
13308	F	55	18 years	Hands, ankles, knees, hips, wrists, shoulders	2 years	Improved nutrition and strength.

Summary of Use of Mushroom Therapy on 10 Cases of Degenerative Arthritis

Case No.	Dosage	Length of time on therapy	Time 1st change noted	Nature of change	Side Effects	Progress
14142	9 daily	8 months	1 month	Less pain, increased circulation, loss of swelling in knees	None	Walking essentially normally in 6 months. Discontinued all analgesics. X-rays showed increase in bone density and improvement in joint space.
13699	9 daily	7½ months	3 weeks	Less pain	Temporary shift of pain from joint to muscle	Improvement in motility. Severe gastric upset in 5 months caused return of pain.
14034	21 daily	3 months	2 weeks	Less pain	Nocturnal diarrhea for 1 week	Completely free from pain in 3 months.
14352	27 daily	3 months	4 weeks	Complete loss of pain	None	Good
14378	27 daily	4 months	2 weeks	Euphoria, improved motility	Brief increase of pain in 2 weeks	Able to walk up and downstairs by third month, to do deep knee bend at fourth month.
14464	36 daily	1 month	2 weeks	Euphoria, less back pain, relief of headaches		BP dropped from 225/140 to 210/110.
14217	24 daily	5 months	1 week	Improved motility, euphoria	Temporary increase in pain at 2 weeks	Patient obtained complete motility of all joints by end of third month, able to again play piano.
13648	9 daily	2 months	1 month	Shift of pain from joint to muscles, temporary weakness of knees	Same as 1st change	Improved motility of all joints. Drop in BP from 148/88 to 130/84.
12138	12 daily	8 months	4 hours	Patient suffered thrombosis of vein in right foot. Suffered severe reaction to Heparin, surgical consultant recommended amputation. Patient given 36 mushroom tablets as a pure experiment. Within 4 hours, circulation of foot improved and patient made uneventful recovery. His long-standing arthritis, much improved under preliminary therapy, made almost spectacular improvement in the 8 months he used the mushroom therapy.		
12208	9 daily	11 months	5 weeks	Improved motility, improved circulation	Temporary shift of pain from joint to muscle	At end of 2½ months, patient so improved that she was able to play piano, move about socially. Bone appeared in X-ray to be more dense. Sedimentation dropped from 65 mm. to 25 mm.

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arthritis. The result of one was excellent, four were good. Four received some temporary benefit but relapsed. The tenth had insufficient time. Though the 54-year-old dentist who was the first patient to receive the medication enjoyed almost spectacular results and was able to return to an active life after enforced retirement, his experience was unique in this group. Four of the patients in this category experienced a shift in pain from the joint to the muscle, due to the fact that as the joints became freer in motility, the contractures of the surrounding muscles and ligaments became noticeable. In the two instances where the patient was willing to continue to exercise and to undertake physiotherapy to lessen these pains, lasting help was received. The other two cases preferred to avoid the muscle pain by not exercising and thus lost the advantage of increased motility.

Both the acute and chronic cases of gout received definite help from the mushroom therapy.

In summary, the result of one was excellent, four were good. Four received some temporary effect, but the total result was not good. The tenth had insufficient time.

The beneficial effects noted in various patients, though not in all were first, a drop in sedimentation rate, less pain, greater motility, and reduced blood pressure, increased red count, a feeling of well being. The effects in some patients that could be classified as undesirable were: shift of pain from joint to muscles and tendons, and temporary nocturnal diarrhea.

The proper dosage was not completely established. When a dosage of 9 tablets daily was stepped up to 36 daily in the case of the first mentioned patient (dentist), a remarkable acceleration in improvement occurred. However, other proliferative arthritic patients on a high daily dosage did not experience the same degree of help. In the degenerative arthritic group, a daily dosage of 9 to 12 tablets appeared to be as bene-

ficial in some patients as a dosage of 21 to 36 daily was to others. Further study is essential to more clearly define this phase of the treatment.

We suggest as an explanation of the reason for the benefits obtained from the mushroom therapy one observation, based on work done over a period of years in our laboratory.¹ We demonstrated that in studying the excrement of the cat and its effect when composted on the growth of the plants, there is a direct relationship between the sexual adequacy of the cat and the value of its excrement as a fertilizer. Likewise, we have found that seeds produced from beans fertilized by the excrement of cats possess viability and keeping qualities in direct proportion to the sexual adequacy of the animal; also, there are changes in the fat fraction of the seed in proportion to the sexual adequacy of the animal.

The domestic mushroom requires for growth a rich compost made from horse manure and the straw bedding of horses which is saturated with their urine. It is known that the horse excretes large amounts of steroids. Based on the work we did in our own laboratory, we believe that it may be possible that some of the steroids from the excrement of the horse may be translocated into the fungus, or reconstituted into compounds peculiar to this form of vegetable life.

While the chemist is searching for vegetable materials² such as the African *Stropanthus sarmentosus*, which can be elaborated into complex steroids, like cortisone, is it not possible, in spite of the negative statement by Fieser,³ that some vegetable steroids may be effective in the treatment of man?

References

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