

THE CHARMING OF WARTS*

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Since antiquity it has been believed that warts can be removed by various magical processes Bett (1). A good account of some of these methods is given by Zwick (2) and Sulzberger (3). There have been some recent advocates that this method is effective. Among recent advocates of such cures are Bloch (4), Grumach (5), Bonjour (6), Sulzberger and Wolf (3), Vollmer (7). Dramatic cures have been reported by Nini (8), Pech (9), Burrows (10), Thiernes (11), Inman (12), Karamchandani (13), Lane (14).

On the other hand some have not had any success with magic, for example Jadassohn (15), Memmesheimer and Eisenlohr (16), Hellier (17). In later years, however, under the influence of Bloch, Jadassohn did come to believe in the efficacy of this therapy for warts. Hypnosis has been reported successful by Obermayer (18), Asher (19), Sinclair-Gieben & Chalmers (20).

It is generally accepted that a virus is the cause, Ciuffo (21), Serra (22), Strauss (23, 24). All types of warts, common, plane, plantar, filiform and venereal are thought to be due to the same virus, Goodman and Greenwood (25), Blank (26), Hellier (17). Warts are contagious (Payne (27), Varicot (28)) and have been transmitted by inoculation (Wile and Kingery (29)). Immunity can develop (Findlay (30)) and this has been made the basis of treatment by Biberstein (31, 32).

Good general reviews on the subject have been written by Sulzberger and Wolf (3), Rulison (33), Niedelman (34), Belisario (35), Allington (36), Rasmusson (37, 38).

The preponderance of the evidence would appear to support the effectiveness of the magical treatment of warts. What then might be the possible explanations?

The commonest explanation is that suggestion is the motive force; *i.e.*, it must inhibit the virus in some way, perhaps by altering the pH, or the temperature, or the blood supply of the

affected skin. There is, however, another possible explanation.

If we admit that an immunity mechanism can operate in the disappearance of warts, it may be that suggestion stimulates the production of antibodies and in that way hastens the cure. When warts do disappear there is a local inflammatory reaction (39), which might indeed be the effect of antigen-antibody reaction. On the other hand if no immunity reaction is involved (38), we might expect the opposite to happen; *i.e.* as warts are favored by heat, moisture and a lower pH, as witness their exuberant growth on the genital flexures, we might expect the skin to become drier, cooler and exhibit a more alkaline pH.

A second possible explanation is that the operator himself has a specific magical influence, the healing touch, perhaps equivalent to the Psi factor in extra-sensory perception (J. B. Rhine (40)). It might be possible to elucidate this point if one could do a series in conjunction with someone who possesses this power, for example a dowser or a witch doctor. The difficulty would be to find an operator who would co-operate over the long period necessary.

THE DESIGN OF EXPERIMENTS TO DETERMINE WHETHER CHARMING CAN CURE

A method must be used which is sufficiently impressive to the patient but could not possibly of itself affect the warts. This method is then applied to only one or two warts of a large number, and the results observed.

Procedure No. 1

The principle used was to give a slight electric shock to the patient by touching the wart. The patient places one hand on a metal plate connected to one pole of a hidden induction coil, the other pole being connected to the "magic" metal wand with which the wart was touched. If necessary the wart was first moistened with "magic" saline. Attempts to use a finger instead of an insulated probe had to be abandoned because the normal skin of the operator got the worst shock! To unsophisticated patients the

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remark was made "you have felt the power," and it was made clear that the treated warts would drop off. To more sophisticated patients it was explained that this was a new form of scarless diathermy.

The patients were observed at fortnightly intervals and the treatment repeated at each visit, for a total period of three months or more if possible.

One might add, at the risk of repeating the obvious, that there are difficulties in following up warts which have been unsuccessfully treated. The patient wants quick results and is likely to seek some other practitioner who may excise them and thus ruin the experiment. In the present series, if continued attendance seemed unlikely or the warts were obviously unaffected, monopolar diathermy was used and was presented as a more powerful form of the original magic. With two exceptions the present lesions were all in Negroes who were mostly unsophisticated and who had a very deep belief in magic.

Theoretical considerations.—There are four possibilities in the result:

such a method in local X-rays, in which the current is not turned on, thus giving a simulated or dummy treatment. If we then treat one wart with X-rays and a second with a simulated treatment while leaving the remainder untreated, we have eight possibilities.

Category	X-ray Treatment	Simulated Treatment	Untreated	Possible Explanation
1	Disappeared	Disappeared	Disappeared	Spontaneous
2	No change	No change	No change	No effect
3	Disappeared	Disappeared	No change	Suggestion
4	No change	No change	Disappeared	Spontaneous
5	Disappeared	No change	No change	X-rays effective
6	No change	Disappeared	Disappeared	Spontaneous
7	Disappeared	No change	Disappeared	Spontaneous
8	No change	Disappeared	No change	Suggestion

Category	Treated	Untreated	Possible Explanation
1	Disappeared	Disappeared	Spontaneous
2	No change	No change	No effect
3	Disappeared	No change	Suggestion
4	No change	Disappeared	Spontaneous

In No. 1, since both the treated and the control lesions disappeared, it is clear that magic had no effect, and the disappearance must have been spontaneous. In No. 2 again, the treatment had no effect. In No. 3 the magic has appeared to work and suggestion is a possible explanation. In No. 4, unless we believe the patient rebelled against the suggestion, we must assume that spontaneous disappearance is the explanation.

Procedure No. 2

A more refined experiment can be planned if we can use an effective method which is invisible. Then on one control we mime the method and over the other controls do nothing to suggest a cure is being attempted. We have

Only in Category 3 and 8 is suggestion possible. Not all of these permutations were in fact observed. It is not advisable to direct heavy doses of X-rays to the neighborhood of the ends of growing bones in young persons, so that in practice the X-ray method was almost confined to adults with multiple plantar warts.

The ideal case then for investigation by either procedure is one with multiple symmetrical warts on both limbs. This was, however, too infrequent an occurrence, and a number of cases had to be used who had merely a group of warts on one limb only.

It would have been a refinement to have selected the warts which were to be treated by some random process. In practice this was not possible and the principle adopted was to treat approximately half and leave half untreated, those which were actually treated being dictated by convenience. A further refinement would have been a blind assessment without knowledge of which warts had been treated. This, however, would not seem very essential. Either warts have disappeared or they have not: one is not judging a subjective improvement.

RESULTS
(Common and plane warts)
Procedure No. 1

Category	Number of Patients
1. Spontaneous	9
2. No effect	43
3. Suggestion	4
4. Spontaneous	6
Total	62

Only in 4 cases is the operation of suggestion possible. Two of these were dramatic cures; and considered uncritically and if all the warts had been treated would have seemed to prove the efficacy of magic. Unfortunately for this thesis the untreated warts also disappeared shortly afterwards in both instances. There was unequivocal evidence of spontaneous disappearance in 15 cases. Thus there is very little evidence that suggestion has been effective; and spontaneous disappearance is a much more probable explanation. One notes that when warts disappear, they usually, but not in all cases, disappear at the same time. The average life of those that did disappear was 46 weeks, and the average duration before treatment was also 46 weeks. Over the period of observation the warts disappeared in 30.6% of cases while the cure rate over a 2 week period after treatment was 8%.

RESULTS
(Plantar warts)
Procedure No. 2

Category	Number of Patients
1. Spontaneous	4
2. No effect	11
5. X-rays effective	5
6. Spontaneous	2
Total	22

Other categories not observed.

There was no hint of suggestion being effective. There was evidence of spontaneous disappearance in 6 cases. The average duration before treatment was 3 years and the spontaneous cure rate 27.5 per cent. In general, the

results indicated the intractable nature of the complaint and demonstrate also that X-rays are not very effective, while there would appear to be no place at all for psychotherapy.

PUBLISHED REPORTS OF PREVIOUS
INVESTIGATORS

What can be gleaned from previously published work? Wile and Kingery (29) found the incubation period to be from 4 to 8 weeks after injection of the virus, while second generation warts had an incubation period of 6 months. Templeton (41) found an incubation period of up to 20 months and the thermal death point of the virus to be 50 C. Jadassohn (15) found the incubation period to be from 7 weeks to 3 months. Biberstein (32) stated that by injecting presumably ineffective extract of normal human skin, 30 per cent of cases were cured. This would then be the basic spontaneous disappearance rate. By injecting human or cattle wart extract, 72.5 per cent of cases were cured. The injections were given twice weekly and varied from 10 to as many as 50.

Rulison (33) found an incubation period of from 1 to 21 months and an average of 4. He found the average duration was from 2 to 3 years, the shortest being 1 month and the longest 28 years. In a series in which spontaneous healing could be assumed, the average duration was 2.2 years. In a short series given psychotherapy, the average duration was 9.4 months.

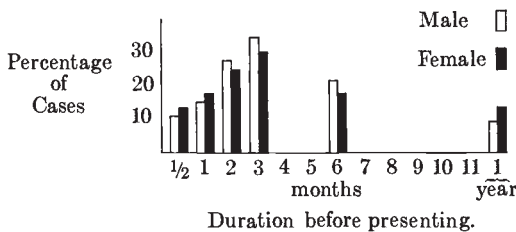
Vollmer (7) found that plane warts often disappeared in 4 days once they had begun to go. After suggestion treatment, plane warts usually disappeared within 2 to 3 weeks. He cured 33.3 per cent of cases of common warts by psychotherapeutic means and this took place within 2 to 12 weeks. He calculated that without suggestion warts took ten times as long to disappear.

Van der Werf (42) found an incidence of 7.2 per cent in children, and without treatment, 65 per cent disappeared during 2 years of observation. Hellier (17) treated 74 cases of warts on both hands with X-rays to one hand only. The other hand was exposed to the machine without the current being switched on. On the irradiated hand only, 2 cases responded and 1 partly. But in 27 cases the warts disappeared from both hands. This could be either suggestion or sponta-

neous cure and gives a rate of 36.5 per cent. The cases were observed over 3 months or more. Bloch treated 179 cases by suggestion. He obtained a cure rate of 88.4 per cent in the case of plane warts and 44.1 per cent in common warts, mostly within 1 month. He believed such a high percentage could not be spontaneous. Against this contention is the fact that his control series was almost as good. He observed that warts lasted 1½ to 2 years.

Memmesheimer and Eisenlohr (16) treated 70 warts and used a further 70 as untreated controls. After 6 months the untreated showed 3 more cures than the treated! They obtained a cure rate of 34.4 per cent in plane warts and 23.7 per cent in common warts. The Montgomerys (43) noted that the average duration of warts before they came under observation was 11 months. Strauss (23) stated that the duration of plantar warts averaged 5.5 months, while common warts averaged 9.2 months. Horwitz and Marker (44) cured 27 per cent of plantar warts in 3 months using a placebo only.

Rasmusson (38), in an epidemiologic study, found that plantar warts were disappearing in 3.1 per cent of patients. This spontaneous regression was equally frequent in the two sexes, but was more frequent in children. Two thirds of the cases presented when the warts had been in existence for 2 to 6 months. When regression occurred, it was always present in *all* warts. The duration of the regressing warts shows an interesting distribution.



Rasmusson concluded that antibodies were not involved. If they were, one would expect more frequent and earlier cases of regression in patients with only 1 wart than in patients with several, but this was, in fact, not the case. Massing and Epstein (45) concluded that each wart behaves as if it had a life cycle of its own.

In the case of the dramatic cures reported by Nini, Pech, Inman, Karamchandani, and others, one notes that all the warts disappear together. In other words, in none of these dramatic cases of cure are there any controls.

In Sinclair-Gieben's cases, however, the controls would appear to be adequate, in that he caused warts on one side of the patient's body to disappear under hypnosis. This, however, took from 5 to 16 weeks, rather a long time, and in one case, warts on the untreated side disappeared 6 weeks later which suggests spontaneous disappearance in that case at least. Clearly, however, there is scope for further investigation and repetition of this experiment which, if substantiated, would be of fundamental importance. The results obtained by Anderson (46), on the other hand, were very different. He achieved the same high rate of cure (60%) of plantar warts in cases treated by active measures, as in those treated with placebos only. The cure rate was found to decrease with the age of the patient.

A possible explanation.—There is a third and less romantic possibility to the alternatives of suggestion and the "healing touch." This is that warts have a limited life and at the end of that life die off. They may die from old age or possibly from the development of immunity in the patient. Warts would then have a spontaneous disappearance rate. And if their disappearance happens to follow shortly after the application of a magical procedure, this then gains the credit. And it might coincide sufficiently often with the magic ritual to give the impression that magic is frequently effective.

It is most important to try to discover the natural rate of disappearance of warts, and only after that to assess the effect of magic. This is no easy task, for as remarked before, patients want to be cured; so that warts, particularly obstinate ones, are likely to be destroyed by physical means before the end of their natural life. Nor can we assume, as in some other diseases, e.g. gonorrhoea in the male, that patients with warts who fail to attend are cured. They may be, but more probably the patients are disappointed with the progress made and either give up trying or seek another practitioner.

Finally, according to some authorities the very fact that the physician has observed the

wart in itself constitutes a psychological treatment.

Do warts, in fact, behave as if they had a definite life?

If we start with a large number of warts, and can plot the numbers disappearing each month against the time required for disappearance, then if warts are of limited duration, we ought to obtain a curve which would be the standard frequency distribution of Gauss. From this we could calculate the average life of warts. However, we are up against the same difficulty of making lengthy observations. Nevertheless, Rasmusson's results do appear to suggest a Gaussian distribution.

In the ordinary clinic it is usually possible to observe warts only for a few months for the aforementioned reasons. One can, however, quite easily observe the cases for a few months and also elicit from the patient a rough estimate of how long the warts had been present before coming for treatment. From this we can calculate:

1. The average duration of warts.
2. The percentage cure over a short period (magic cures).
3. The percentage cure over a long period.

Clearly the duration is crucial, for if the duration is short, many cures would be observed, while if long enough, no cures would be observed.

SUMMARY OF RESULTS OF PUBLISHED WORK
Common and plane

	Author					
	Biberstein	Rulison	Vollmer	Hellier	Bloch	Hemmesheimer and Eisenlohr
Average life		2.2 yrs				
Average duration before treatment						
Cure rate	30%		33.3%	36.5%	88.4% plane 44.1% common	34.4% plane 23.7% common
Average length of observation.			3 months	3 months		6 months
Life when treated		9.4 months				

	Author			
	Montgomery	Strauss	Sinclair-Gieben	Present Series
Average life		9.2 months		
Average duration before treatment	11 months		6 months plus	46 weeks (of cured and uncured)
Cure rate			64.3%	30.6%
Average length of observation			4 months	3 months
Cure rate over 2 weeks				8.0%

Plantar

	Author				
	Rasmusson	Strauss	Horwitz and Marker	Anderson	Present Series
Duration before treatment	6 months				3 years
Cure rate	3.1%		27%	over 60%	27.5%
Average life		5.5 months			

It is seen then that, with 2 exceptions, the cure rate is usually around 30 per cent, and this appears to be the basic spontaneous rate of cure. In the present series the rate is 30.6%. If we calculate the average life of those warts that were actually cured in the present series, it is 46 weeks, which is the same as the average period that elapsed before treatment for the whole series. This suggests that those cured were in fact at the end of their life. Possibly the explanation of Bloch's high figures may rest here, as his untreated warts cured themselves at almost the same rate. It seems likely that before such a banal complaint as warts would reach a man of such eminence as Bloch, a considerable time would elapse, and in fact where the previous duration is recorded, they all had been present for at least one year, and generally longer.

CONCLUSION

There is no real evidence that magic or suggestion has any effect on warts. The dramatic cures sometimes reported are probably the result of the magic ritual coinciding with the end of the warts' natural life. The fact that some serious investigators have reported successes with few exceptions, appear to be due to their not having used adequate controls. The natural rate of cure of warts is commonly of quite a high order and this further permits misinterpretation of the data.

These results are of the same order as the placebo response in which a 35% rate of cure can be obtained (Beecher (47, 48, 49)). The placebo effect has been demonstrated in such conditions as post-operative pain, headache, anxiety. These are all conditions which are susceptible of spontaneous remission. The placebo effect may remove the symptoms of a disease but would not seem to eventuate a cure of disease. In the removal of warts, which are virtually symptomless, the disease is actually cured.

Undoubtedly these considerations also apply to many diseases in which orthodox therapy is not very effective, but which often undergo spontaneous remission, such as rheumatism, arthritis, hay fever, etc.

SUMMARY

Experiments designed to test whether warts can be charmed away are considered. The results of such an experiment indicate that suggestion

or charming does not succeed. After further consideration of previously published work, a possible explanation of the success of the treatment of warts by suggestion is that because warts have a limited life, treatment initiated near the end of this life results in cure. This cure is often and erroneously attributed to the immediately preceding therapy.

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