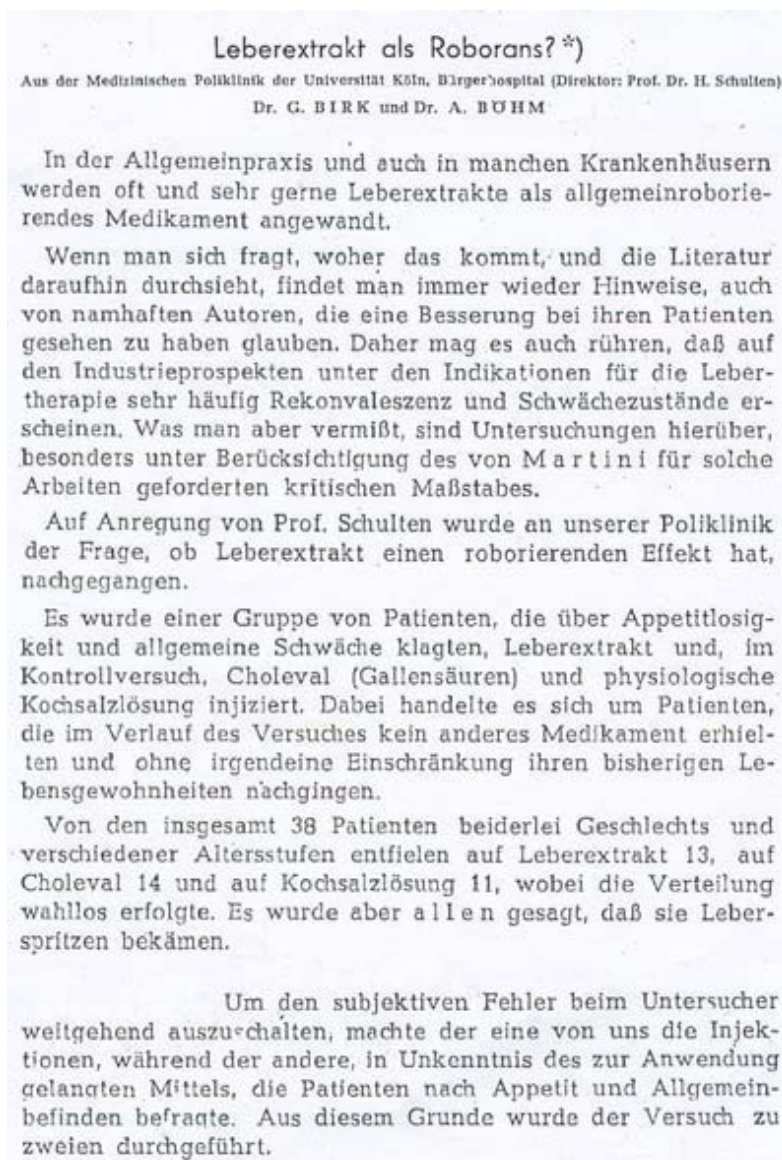


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Birk G, Böhm A (1950). Leberextrakt als Roborans? [Is liver extract a 'tonic'?] Die Medizinische Welt 1:51-52.

Key passages



Translation

In general practice as well as in many hospitals liver extracts are often and very readily used as a general tonic.

If one asks oneself where this [practice] comes from and searches the literature to find out, one finds hints time and again that even authoritative authors believe they have seen an improvement with their patients. This may also be a reason that, among the indications for liver extracts, information leaflets from industry very frequently mention convalescence and weakness. However, one feels the need for investigations, and in particular, that these should be done according to the critical criteria required by Martini [Martini 1932].

Motivated by Professor Schulten, we investigated, in our outpatient department, the question of whether liver extract

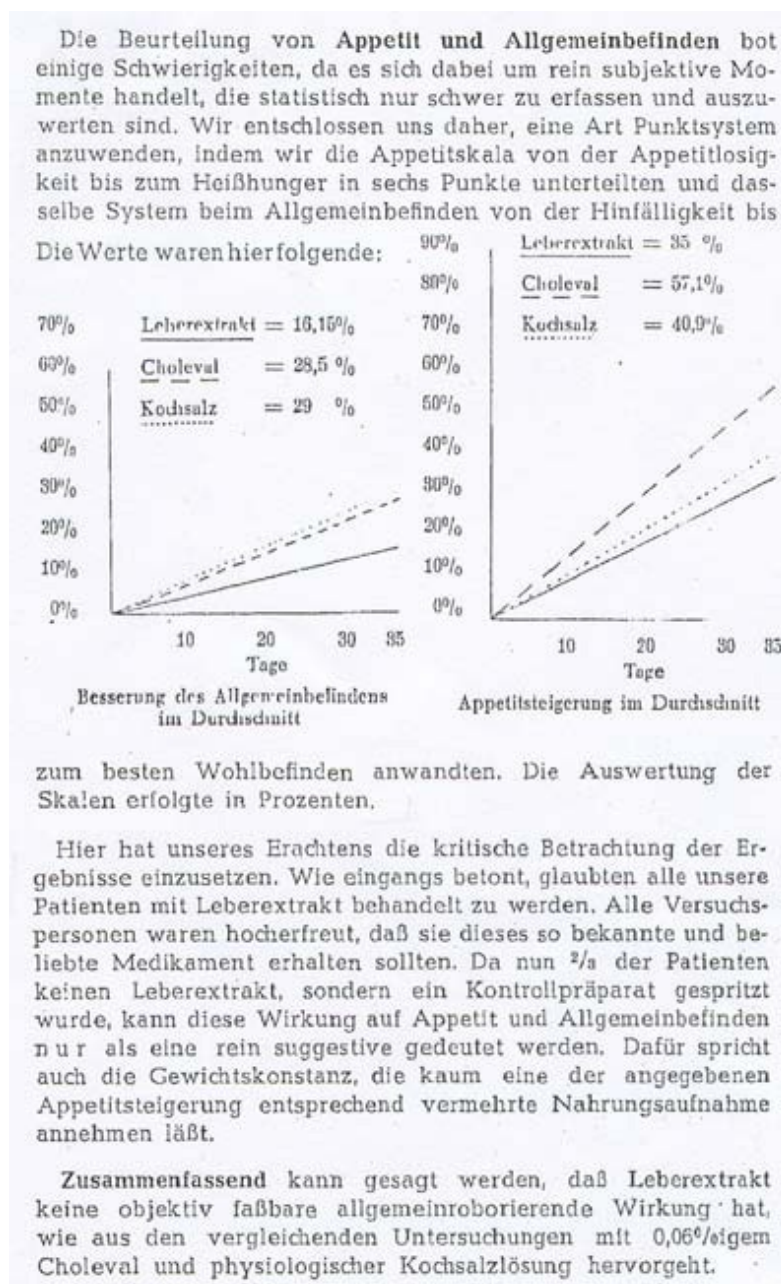
acts as a tonic.

A group of patients who complained of loss of appetite and general weakness were injected with liver extract and, in a controlled experiment, with Choleval (bile acids) and physiological saline. None of the patients received any other medicament during the course of the experiment and they all followed their usual daily lives without any restriction.

Of a total of 38 patients of both sexes and various ages, 13 received liver extract, 14 Choleval, and 11 saline. The distribution was achieved indiscriminately [at random]. However, all the patients were told that they were receiving liver injections...

...In order to eliminate as far as possible the subjective errors of the observers, one of us gave the injections while the other, unaware of the medicament used, questioned the patients about their appetite and general wellbeing. For this reason the experiment was carried out by the two of us...

... Judging the appetite and general wellbeing presented some difficulties because this is purely subjective, and difficult to grasp and analyse statistically. We therefore decided to apply a point system by dividing into six points an appetite scale ranging from 'loss of appetite' to 'ravenous hunger', and by using the same system concerning general wellbeing, [on a scale ranging] from 'decrepitude' to 'complete wellbeing'. The analysis was done using percentages.



Translation

By contrast to the unchanging trends in the objective values [of blood counts and weight] described above, there was a remarkable improvement of appetite and general wellbeing [in all groups]. The values were as follows [see Figures].

In [all measures] the response of the patients to liver extract is below that of one of the control preparations.

It is here that, in our opinion, a critical approach to the results has to begin. As stressed at the outset, all our patients believed that they were being treated with liver extract. All participants in the experiment were delighted that they would receive this well known and appreciated medicament. Since two thirds of the patients were not injected with liver extract but with a control preparation, this effect on appetite and general wellbeing can only be interpreted as purely due to suggestion. The unchanged body weight suggests that there was not any increased food intake corresponding to the reported improvement in appetite.

In summary, it can be said that, compared with 0.06 % Choleval and saline, liver extract has no objectively detectable effect as a tonic.

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