THE ROLE OF ALCOHOL IN AUSTRIAN ROAD TRAFFIC

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Nowadays it is undisputed that the intake of alcohol may lead to road traffic accidents. Summarizing the results from studies performed in developed as well as developing countries, it is obvious that alcohol directly causes 30 to 50 % of all severe road traffic accidents. Severeness of accidents could be demonstrated as correlating with the degree of alcoholisation (WHO,Technical Report, 703, 1984). (11)

Alcohol plays in Austria - a country with a high alcohol-consumption-rate and highly developed motorisation- an important role in accident frequency (accidents with and without injuries) and can be related to the number of car-wrecks with fatal outcome. Table 1 shows that 10% of Austria’s traffic accidents are caused by alcohol-intake and that alcohol could be proved as causative in 15 % of all fatalities.(5,7)

Table 1

ALCOHOL RELATED ACCIDENTS. ACCIDENTS WITH INJURIES AND FATALITIES

<table>
<thead>
<tr>
<th>Year</th>
<th>Acc. with injuries overall</th>
<th>Acc. with alcohol</th>
<th>% Injured overall</th>
<th>Injuries with alc.</th>
<th>%</th>
<th>Fatalities</th>
<th>Fatalities with alcohol</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>48053</td>
<td>4759</td>
<td>9.7</td>
<td>69438</td>
<td>10.9</td>
<td>2231</td>
<td>272</td>
<td>16.7</td>
</tr>
<tr>
<td>1976</td>
<td>45016</td>
<td>4159</td>
<td>9.2</td>
<td>62771</td>
<td>10.3</td>
<td>1903</td>
<td>252</td>
<td>13.5</td>
</tr>
<tr>
<td>1978</td>
<td>43592</td>
<td>3768</td>
<td>8.6</td>
<td>60729</td>
<td>9.7</td>
<td>1886</td>
<td>268</td>
<td>14.2</td>
</tr>
<tr>
<td>1980</td>
<td>46214</td>
<td>4001</td>
<td>8.7</td>
<td>64357</td>
<td>9.8</td>
<td>1742</td>
<td>245</td>
<td>14.1</td>
</tr>
<tr>
<td>1982</td>
<td>47067</td>
<td>4229</td>
<td>9.0</td>
<td>64432</td>
<td>10.3</td>
<td>1681</td>
<td>262</td>
<td>15.6</td>
</tr>
</tbody>
</table>

To evaluate the importance of alcohol consumption in road traffic safety many experimental studies have been performed, investigating efficiency of brain function at diverse degrees of alcoholisation. Epidemiologic data, however, are scarcely available on this topic. (2,3,10)

Therefore several institutions, partly working together, have started to work out hard data (Psychiatric Univ.Clinic, Road Safety Board of Austria, Anton Proksch Institute and others)(9,6).

We want to concentrate on 3 questions and results from these
studies:
1. Which status does alcohol take in Austrian society?
2. How is the relation of driving activity to mode and causes of accidents?
3. Does the disease "alcohol addiction" define a group of persons causing more accidents than others?

ad 1:
Austria is a country with firmly rooted drinking habits with a high alcohol-consumption-rate. Since the late 70ies the per-head-consumption-rate of pure alcohol remains equal at a level of 10 to 12 liters per person per year.

In 1981 Mader et al published a study on use- and abuse-frequency of alcohol-containing beverages and on the status of alcohol in Austrian society. He found out that Austrians regard alcohol as basic food, like bread and milk. Furthermore he could clarify about the image of alcohol consumers: alcohol consumption provides the user with an image of power and force. With respect to regional differences 80 to 90 % of all Austrians drink alcohol. 17 to 35 % of all Austrian men show an alcohol misuse (defined as consumption of minimum 420 g of pure alcohol per week). Only 1 to 2 % of women do so. One mode of explanation for these sex-differences could be found in alcohol drinking as well as in driving).

ad 2:
Motorisation and driving activity rise constantly since years, especially concerning private cars and small transporters.

According to these authors road traffic participation frequency rose to nearly the double during the last 14 years. Accidents show in relation to this fact a different profile: A poor influence on overall crash-frequency can be noticed after the introduction of restrictive measures like the BAC of 80 mg% when driving and also after the introduction of information campaigns. These measures on the other hand have succeeded in reducing traffic-injury-frequency and even more the mortality rate in relation to overall drinking activity (table 2).
Alcohol addiction defined by the symptoms of dosage increase, loss of control, psychic and somatic abstinence syndrome as well as alcohol related diseases, comprises an inhomogeneous group of persons, like LESCH could show in 1985. In a prospective study he worked out 4 different types in the course of chronic alcoholism. This study encompassed all 444 patients of one determined Austrian region, who had been admitted to hospital because of chronic alcoholism within a three-years period. Follow-up time was four to seven years, drop-out rate was 2%. Data collection was made by personal interview only. After contact in hospital and in domestic environment singular symptoms were semiquantitatively recorded at three dates: 1. admission, 2. 12-15 months after admission, 3. at least 48 months after admission. Besides this time-dependent evaluation he also effected a time-unrelated observation of the individual patient, followed by an attribution to individual course types. These subgroups differed in social and psychic features, in the presence and frequency of suicide attempts, criminal acts etc. (6)

No symptoms could be identified defining a group of persons
causing accidents. They did not differ in psychic development, nor in social conditions or drinking behaviour nor in psychic and somatic deficiencies.

As there exists no typical accident prone personality as well as no typical personality inclining to alcohol abuse these results are not surprising.

Age of drivers seems to be more important in incidence of car-wrecks. The number of persons involved in accidents reaches a peak around the age of 20. Persons getting involved in alcohol-connected or addiction-connected troubles show a frequency peak between the age of 35 and 55. These differing age-peaks clearly demonstrate the fact, that alcohol addiction plays a subordinate role in accident prophylaxis(4).

In Austria alcohol plays an important role in society and represents one of the possible causes for accidents. The disease of alcohol addiction represents for afflicted persons a severe misfortune. In road traffic safety however it plays a minor role. We think that the main approach to solutions of the problem of alcohol as a cause for accidents should ly in a reduce of the still high permission to alcoholic beverages as well as in a reduce of "power-image" when being drunk.