TRENDS IN AMINOPENICILLINS (AP) CONSUMPTION IN RUSSIA

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Background

Traditionally, in Russia oral ampicillin was prescribed more frequently than amoxicillin. For example, in 1998, the proportion of ampicillin and amoxicillin consumption was 96.6% and 3.4% (1.7 vs. 0.06 DDD/1000 inhabitants/day), respectively.

Purpose

Determine the patterns of AP consumption in Russia in 2001-2003.

Methods

Data on the use of AP in Russia were collected from the national projects "Retail Pharmaceutical Market Audit in Russia" and "Hospital Audit in Russia" that are conducted by The Remedium Group of Companies since 2000. The pharmacy and hospital audits are realized in 51 and 27 regions of the Russia, respectively. Imprecision of the data of both audits does not exceed 10%. The final reports contain products names, Anatomical Therapeutic Chemical classification codes, drug forms, dosages and packages quantity. The use of antibiotics (AB) was expressed as the number of defined daily doses (DDD) per 1000 inhabitants per day - DDD/1000 inhabitants/day (DID).

Table 1. Russian population

Year	Population (millions)
2001	144.8
2002	145,2
2003	144,2

Results

The mean consumption of penicillins (J01C ATC group) in 2001-2003 in Russia was 3.2 DID (2001 - 3.71, 2002 - 2.90, 2003 - 2.91). They were the most commonly used group of AB (27.1% of the total AB consumption) (fig. 1).

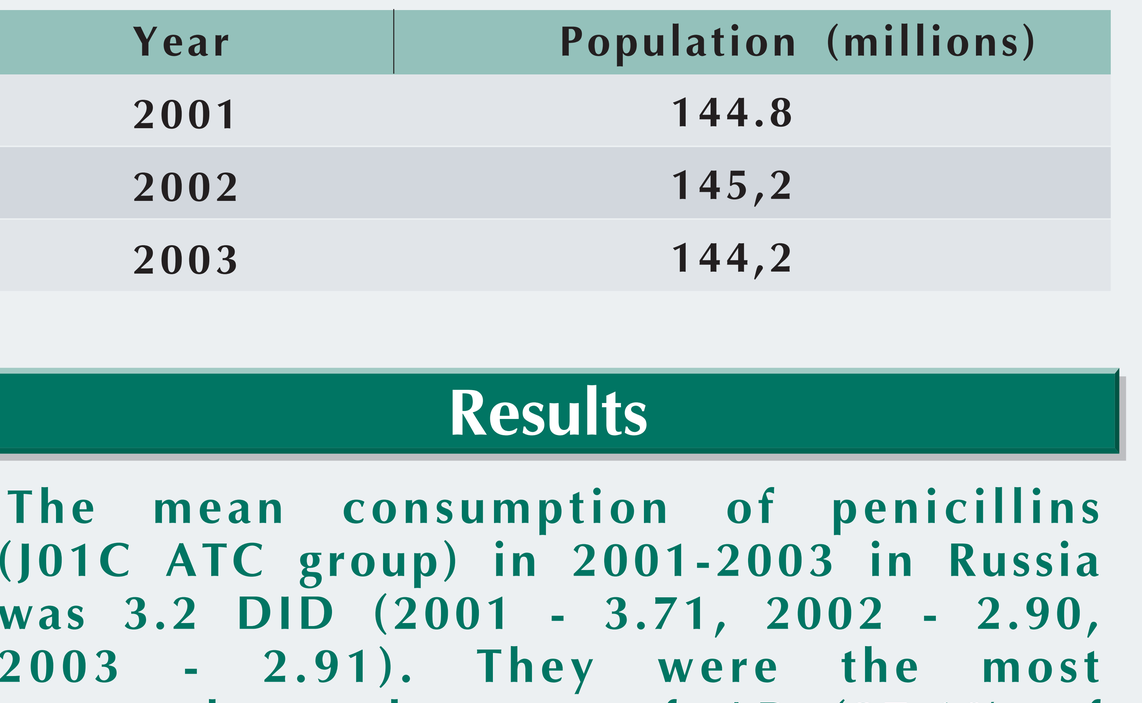

Figure 1. Antibiotic consumption in Russia, 2001-2003

Among penicillins AP were prescribed above all (62.5%) and their mean use in 2001-2003 was 2.0 DID (2001 - 2.13, 2002 - 1.84, 2003 - 2.01) (table. 2).

Table 2. Penicillins consumption (DID)

		2001	2002	2003
J01C A01	Ampicillin	1.67	1.10	1.00
J01C A03	Carbenicillin	0.003	0.001	0.001
J01C A04	Amoxicillin	0.46	0.74	1.01
J01C A12	Piperacillin	0.000007	0.000007	0.000009
J01C E01	Benzylpenicillin	0.81	0.46	0.35
J01C E02	Phenoxymethylpenicillin	0.05	0.04	0.04
J01C E09	Procaine benzylpenicillin	0.02	0.04	0.07
J01C E30	Benzathine benzylpenicillin, procaine benzylpenicillin, benzylpenicillin	0.00002	0.007	0.02
J01C F02	Cloxacillin	0.000002	0.000002	0
J01C F04	Oxacillin	0.21	0.14	0.07
J01C R02	Amoxicillin and enzyme inhibitor	0.06	0.09	0.15
J01C R03	Ticarcillin and enzyme inhibitor	0.000005	0.00008	0.0001
J01C R04	Sultamicillin	0.0004	0.0005	0.002
J01C R05	Piperacillin and enzyme inhibitor	0.0002	0.0003	0.00007
J01C R50	Ampicillin/oxacillin	0.43	0.28	0.20
J01C	Total	3.71	2.90	2.91

From 2001 to 2003 the use of ampicillin decreased by 40% (from 1.67 DID to 1.0 DID). However, its oral form was predominantly prescribed (2001 - 1.3 DID, 76.5%, 2002 - 0.81 DID, 72.7%, 2003 - 0.71 DID, 70%). While, the consumption of amoxicillin increased by 54.5% (from 0.46 DID in 2001 to 1.01 DID in 2003) (fig. 2).

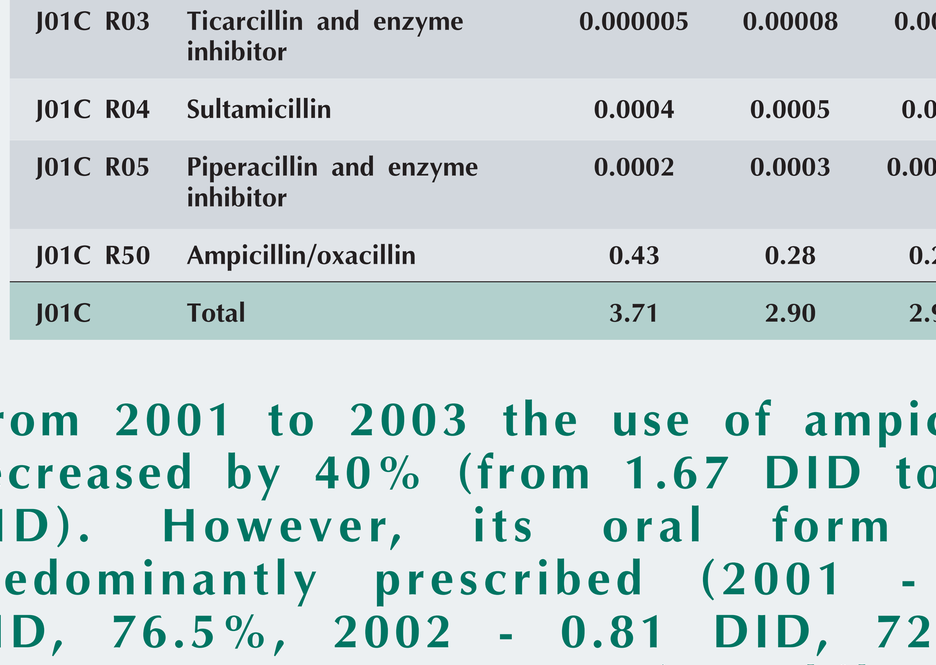

Figure 2. Aminopenicillins consumption

Conclusions

In Russia the use of penicillins is high and AP are the most widely prescribed among this group. The most important positive finding in this analysis was the increase of amoxicillin and decrease of ampicillin consumption.