
INTRODUCTORY LECTURES

Opioids in Middle Eastern Populations

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Abstract

Morphine is one of the more ancient medicines known, yet the global access to this opioid is still severely limited. In spite of the fact that strong networks for national, regional and global care have been emerging, the overall situation of pain management, in general, and in cancer patients in specific, remains of great concern; when we examine the availability of pain relief drugs in Middle Eastern countries. The data presented in this abstract rely on the INCB annual reports. Consumption of Morphine. In the USA the consumption is on the rise and has reached over 76 mg/capita in the year 2007 (the global mean is 5.57 mg/capita). In Israel the consumption of morphine in 2007 is similar to that in 2004, a little above 3.0 mg/capita. In Cyprus during the year 2004-2007 the consumption was at about 2.8 mg/capita. In Jordan, morphine consumption has been on the rise since 2006 and is at about 2.0 mg/capita. In Lebanon, morphine consumption has been at a steady state (1.0 mg/capita) for the period 2004-2007. In Turkey, the consumption of morphine has been fluctuating at doses about 0.1 mg/capita for the period 2004-2007. In Saudi Arabia, the consumption of morphine has been at very low doses of about 0.05 mg/capita for the same time period. In Egypt, the dose of consumption were fluctuating between 0.01-0.14 mg/capita during the years 2004-2007. When comparing the quantities of consumption in the various Middle Eastern countries with that in the United States (in year 2007), it became apparent that in the USA the consumption of morphine is: 10 times that in Israel; 27 times that in Cyprus; 38 times that in Jordan; 69 times that in Lebanon; 150 times that in Saudi Arabia; 447 times that in Turkey; 633 times that in Egypt. It is nowadays clear that the medial use of opioid drugs is indispensable for the relief of pain and suffering; and most developing countries use very small amounts of morphine.

Keywords: Palliative care - morphine use - Middle Eastern countries

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Introduction

Physical pain and the accompanying emotional suffering is not just a biological process, but is determined by people's emotions, behaviors, and social relationships. In treating cancer patients, these factors are often ignored or not defined as part of palliative care. However, pain management has a pivotal role in controlling disease progression, not to mention its impact on patients' ability to function and maintain a positive quality of life. Therefore, in order to accomplish reasonable quality of life, palliative care treatment has to combine both the physical along with the emotional problems. Today, every individual treated for cancer should expect to have his pains managed first prior to any additional treatments associated with his/her psychological and social needs. Opioids are today the leading drugs for the complex pain problems that individuals with cancer are experiencing. Morphine is an ancient medicine, yet global access to opioids is severely limited. Therefore, in spite of the growing access to palliative care worldwide, the situation remains of great concern when we examine the availability of pain relief to those in need.

Opioid Consumption in the Middle East

The various programs for cancer relief rely strongly on the availability of opioids. Reported opioid consumption figures have been used to give an approximation as to the availability of pain relief and palliative care in individual countries. The International Narcotics Control Board (INCB), the body responsible for monitoring narcotics, tracks availability of opioids and receives reports on national opioid consumption and estimates future needs.

The current report is based upon INCB annual reports for the United States and several Middle Eastern countries. In the USA: The consumption of morphine is on the rise and has reached over 76 mg/capita in year 2007, whereas the consumption of meperidine (pethidine, demerol) is clearly steadily declining (see Figure 1a and 1b). Fentanyl (80 times more potent than morphine) has been introduced into clinical practice and its consumption has apparently reached a plateau during the years 2005-2007 (see Figure 1c). Consumption of Principal Narcotic Drugs in the USA (mg/capita) during the years 2004-2007 is illustrated in Figure 2.

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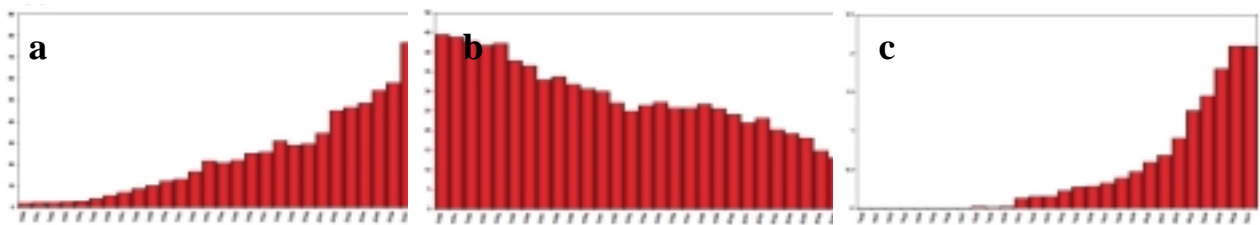


Figure 1. Consumption of Palliative Care Drugs in the USA, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

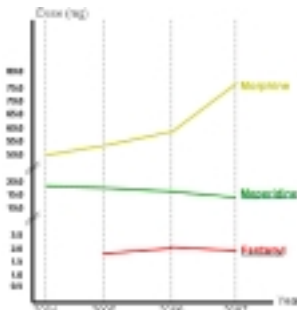


Figure 2. Consumption of Principal Narcotic Drugs in the USA (mg/capita) during years 2004-2007

In Israel: The consumption of morphine in 2007 is similar to that in 2004 (see Figure 3). The same is true for meperidine. There is a slight rise in the consumption of fentanyl in recent years. Consumption of Principal Narcotic Drugs in Israel (mg/capita) during years 2004-2007 is shown in Figure 4.

In Cyprus: Meperidine is the leading narcotic drug in use, followed by morphine and fentanyl (see Figure 5). Consumption of Principal Narcotic Drugs in Israel (mg/capita) during years 2004-2007 is shown in Figure 6.

In Jordan: Meperidine is the leading narcotic drug; while morphine follows and is on the rise (see Figure 7).

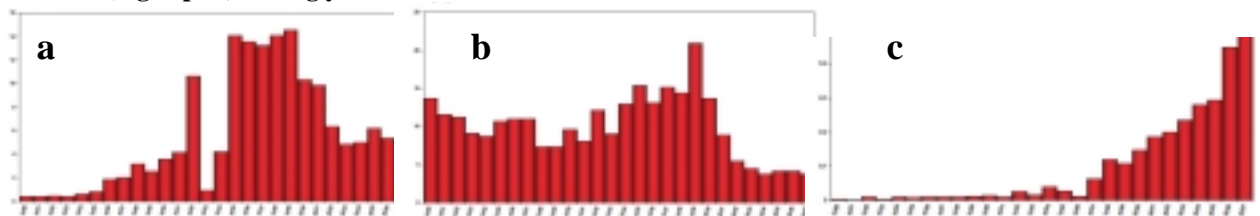


Figure 3. Consumption of Palliative Care Drugs in Israel, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

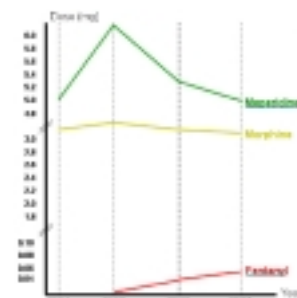


Figure 4. Consumption of Principal Narcotic Drugs in Israel (mg/capita) during years 2004-2007

Fentanyl has so far only limited use. Consumption of Principal Narcotic Drugs in Jordan (mg/capita) during the years 2004-2007 is illustrated in Figure 8.

In Lebanon: The consumption of all three narcotic drugs—meperidine, morphine and fentanyl—is steady for the years 2004-2007 (see Figure 9). As in all other Middle Eastern countries (except for Israel), meperidine is the leading drug followed by morphine and fentanyl. Consumption of Principal Narcotic Drugs in Lebanon (mg/capita) during the years 2004-2007 is illustrated in Figure 10.

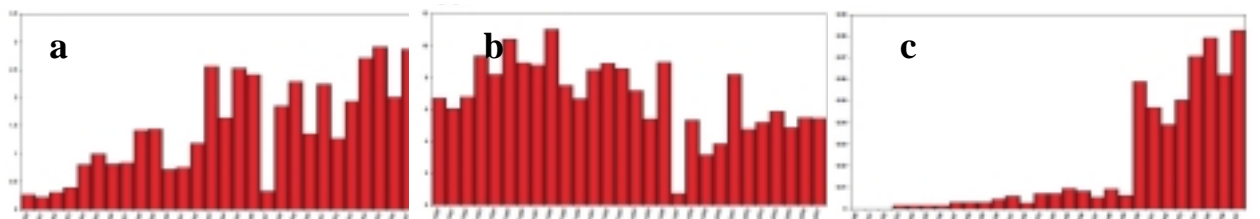


Figure 5. Consumption of Palliative Care Drugs in Cyprus, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

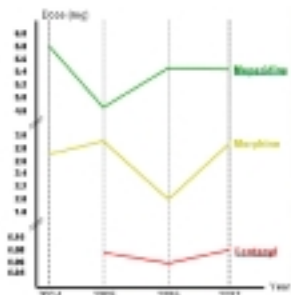


Figure 6. Consumption of Principal Narcotic Drugs in Cyprus (mg/capita) during years 2004-2007

In Turkey: As in other Middle Eastern countries, meperidine is by far the leading narcotic drug, followed by morphine and fentanyl (see Figure 11). Consumption of Principal Narcotic Drugs in Lebanon (mg/capita) during the years 2004-2007 is illustrated in Figure 12.

In Saudi Arabia: Meperidine is by far the leading narcotic drug before morphine and fentanyl (see Figure 13). Consumption of Principal Narcotic Drugs in Lebanon (mg/capita) during the years 2004-2007 is illustrated in Figure 14.

In Egypt: overall, the consumption of narcotic drugs

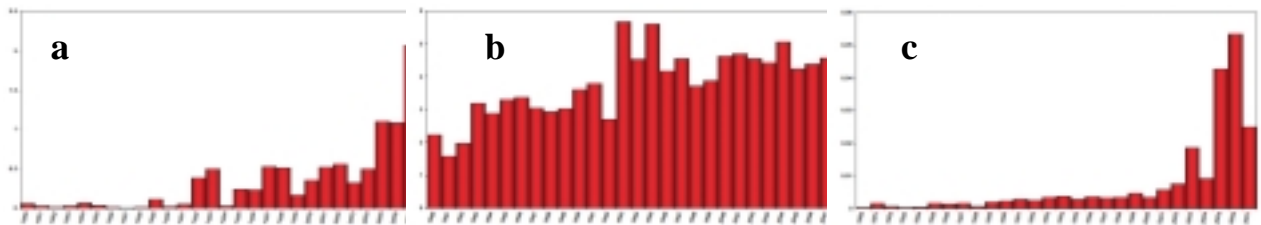


Figure 7. Consumption of Palliative Care Drugs in Jordan, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

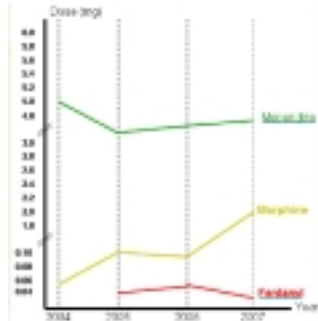


Figure 8. Consumption of Principal Narcotic Drugs in Jordan (mg/capita) during years 2004-2007

is very low. Meperidine is the number one narcotic in use, followed by morphine and fentanyl (see Figure 15). Consumption of Principal Narcotic Drugs in Egypt (mg/capita) during 2004-2007 is shown in Figure 16.

Consumption of Narcotic Drugs in the USA and the Middle East : A Comparative Survey

Morphine: In the United States, as in other North American and West European countries, the use of morphine is increasing, and this drug has become the drug of choice for the management of pain. In Israel its



Figure 9. Consumption of Palliative Care Drugs in Lebanon, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

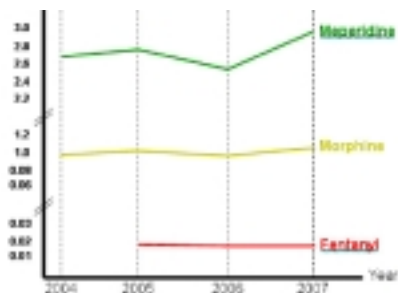


Figure 10. Consumption of Principal Narcotic Drugs in Lebanon (mg/capita) during years 2004-2007

consumption is declining, whereas in Cyprus its consumption has shown fluctuations since 1999, but more recently is similar to what was used 10 years ago. In Jordan a rise was noticed in 2007. In all other countries the consumption is in a steady state through the period of 1999-2007.

Substantial differences were noted in the quantities used in the different countries: In the United States (as in other Western countries) the consumption of morphine is: 10 times that in Israel, 27 times that in Cyprus, 38 times that in Jordan, 69 times that in Lebanon, 150 times that in

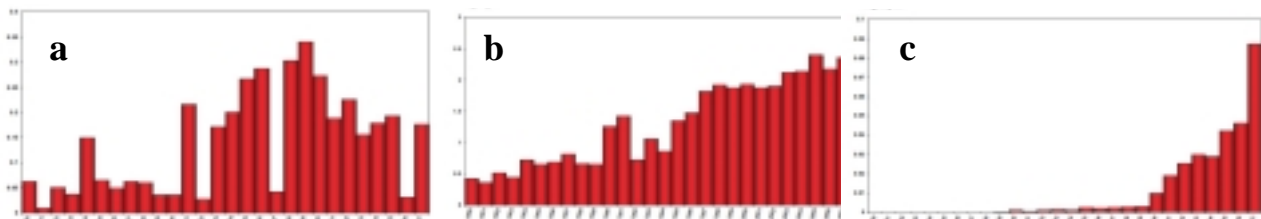


Figure 11. Consumption of Palliative Care Drugs in the Turkey, 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

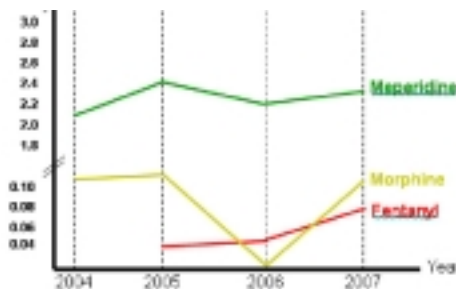


Figure 12. Consumption of Principal Narcotic Drugs in Turkey (mg/capita) during years 2004-2007

Saudi Arabia; 447 times that in Turkey and 633 times that in Egypt.

Meperidine (pethidine, demerol): The consumption of meperidine has been in a decline in the United States and Israel since 2007; and has been at a plateau ever since. In Cyprus, Jordan, Lebanon, Turkey and Saudi Arabia, a rise in the consumption was noted in year 2004. In Egypt the rate of consumption is unchanged from year 1999 to 2007.

In contrast to morphine, meperidine is still the most used narcotic drug in the Middle Eastern countries

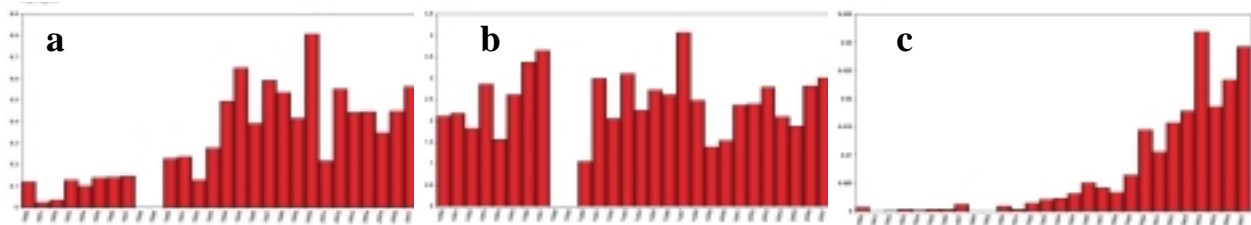


Figure 13. Consumption of Palliative Care Drugs in Saudi Arabia 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

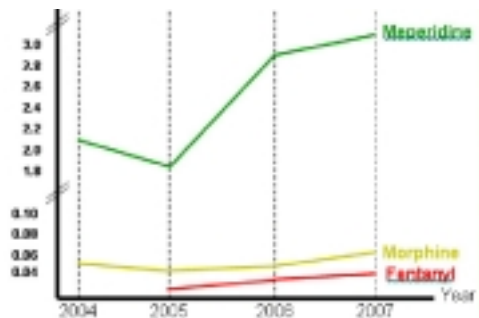


Figure 14. Consumption of Principal Narcotic Drugs in Saudi Arabia (mg/capita) during years 2004-2007

Fentanyl. Overall, the consumption of fentanyl is steady in all countries except for Israel and Turkey which showed increases during the period of 2005-2007. The doses of fentanyl used in the United States are by far higher than those used in Middle Eastern countries: 5 times that in Israel, 28 times that in Cyprus and Turkey; 66 times that in Saudi Arabia; 100 times that in Jordan and Lebanon, and 400times that in Egypt.

Discussion

Table 1 illustrates a situation that reminds countries to enact palliative care and pain treatment policies. In order

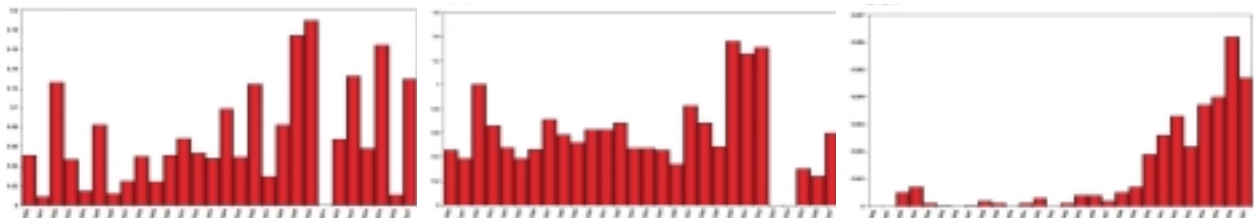


Figure 15. Consumption of Palliative Care Drugs in Egypt 1980-2007. a) Morphine; b) Pethidine; c) Fentanyl

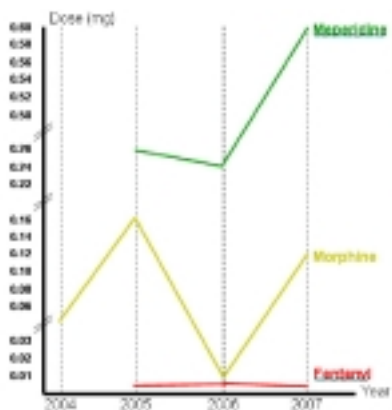


Figure 16. Consumption of Principal Narcotic Drugs in Egypt (mg/capita) during years 2004-2007

examined (except for Israel). By comparing the consumption of meperidine in the United States to that the Middle Eastern countries – the differences are significantly smaller: 2.5 times that in Cyprus, 3.0 times that in Israel and Jordan, 5.0 times that in Lebanon, 5.4 times that in Saudi Arabia. 6.3 times that in Turkey and 30.0 times that in Egypt .

to promote these issues there is a need to develop a comprehensive strategy including community involvement. Oral morphine and other opioid-based medicines ought to be added to the list of essential medicines. This can be done, for example; Uganda’s Ministry of Health and WHO developed national palliative care and cancer pain relief policies whereby nurses were authorized to prescribe oral morphine. The Ministry of Health in Vietnam developed a national palliative care program which included a package of training courses for practicing physicians.

One of the biggest obstacles to provision of good palliative and pain treatment services is a lack of training for health care workers. 82% of healthcare workers in Latin America and 71% in Asia had not received any instruction on pain or opioids in medical school.1 Even in the United States, many physicians are reported to fear unjustified persecution or sanctions for prescribing opioids for pain and, consequently, tend to underprescribe.

The developing world has 80% of the world’s population and accounts for 6% of the global opioid consumption. Accordingly, it is clear that the need of

Table 1. Morphine Estimate, Mortality and Pain Treatment Need for Egypt*

Cancer deaths 2002 estimate	# of individuals expected to need pain treatment in 2009	Estimated total morphine need in 2009 (kgs)	Estimate of morphine need provided by country to INCB for 2009 (kgs)	# of individuals estimate is sufficient for	Percentage of those needing treatment covered %
62,299	49,840	303	10	1,646	3

*This table only calculates morphine estimates. Some countries also use methadone or pethidine for pain control.

patients for opioid analgesia is not being fully met. In the current survey it became clearly evident that the developing countries in the Middle East use small amounts of morphine. The figures shown in this survey illustrate the consumption of Morphine, Meperidine and Fentanyl (mg/per capita), i.e., the total use in a country divided by the population. The difference and huge disparity between the United States and countries in the Middle East are clear. Morphine has been defined jointly by the WHO and the International Association for Hospice and Palliative Care (IAHPC) as an “essential drug”. Taking the current data into consideration, the Middle East Cancer Consortium (MECC) took upon itself the goal to encourage the respective governments, policymakers and healthcare providers to ensure availability of essential pain drugs and thereby support access to analgesia.

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